

# **ATTACHMENT C**

Astellas v. ImStem, C.A. 1:17-cv-12239-ADB  
Lettered Exhibits With Objections

<b>TRIAL EXHIBIT #</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>BEGBATES</b>	<b>ENDBATES</b>	<b>Dep. Exhibit #</b>	<b>Plfs.' Ob.</b>	<b>Def's.' Obj</b>
<b>A</b>	Certified Copy of U.S. Patent 9,745,551	8/29/2017	AIRM00290341	AIRM00290411	<b>Pl. Ex. 003 Def. Ex. 063 Lu Ex. 15</b>	H	
<b>B</b>	Subpoena to testify at a deposition to Susie S. Cheng	3/14/2019			<b>Pl. Ex. 001</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>C</b>	Subpoena to produce documents, information, or objects or to permit inspection of premises in a civil action to Susie S. Cheng	3/14/2019			<b>Pl. Ex. 002</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>D</b>	S. Cheng Linkedin				<b>Pl. Ex. 004</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re priv. log.
<b>E</b>	E-mail from D. Jerez to S. Cheng re Imstem Inc	4/10/2013	LE000001	LE000003	<b>Pl. Ex. 008</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re priv log.
<b>F</b>	U.S. Patent Publication No. U.S. 2012/0027731	2/2/2012			<b>Pl. Ex. 010</b>	IO	
<b>G</b>	E-mail from R. Guido to X. Wang, copying S. Cheng and A. Clemena, re New PCT International No.: PCT/US13/48291; Our Ref. No.: 10143/003338-WOO attaching application as filed and filing receipt	6/27/2013	LE000021	LE000167	<b>Pl. Ex. 013</b>	H, LA, LF, LK	
<b>H</b>	551 PCT as Filed	6/27/2013	LE000022	LE000167	<b>Pl. Ex. 013 [Excerpted]</b>	H, LA, LF, LK	
<b>I</b>	E-mail from X. Fan to S. Cheng re Cost estimates for entering China for two PCT applications with cost estimates and Power of Attorney attached	12/2/2014	LE001242	LE001246	<b>Pl. Ex. 014</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re priv. log.

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<b>J</b>	E-mail from L. Tin to R. Guido, copying S. Cheng, re Hong Kong Standard Patent Application - Your Ref.: 10143/003338-HKO - Our Ref.: 155510US01-HK with filing receipt attached	10/16/2015	LE002404	LE002406	<b>Pl. Ex. 015</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re priv. log.
<b>K</b>	E-mail from R. Guido to S. Cheng re National Entry Estimates for PCT/US13/50077 and PCT/US13/48291	11/20/2014	LE001239	LE001241	<b>Pl. Ex. 016</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re priv. log.
<b>L</b>	E-mail from J. Lu to X. Wang, Copying E. Kimbrel and R. Xu re Collaboration	7/26/2010	LE004277	LE004279	<b>Pl. Ex. 017</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); inonsistent with Plaintiffs' Motion in Limine re priv. log.
<b>M</b>	E-mail from X. Wang to S. Cheng re Collaboration	6/21/2013	IMSTEM-0028061	IMSTEM-0028062	<b>Pl. Ex. 018</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Privilege; For reasons stated in Defendants' Motion in Limine; Inconsistent with Plaintiffs' Motion in Limine re privilege log.
<b>N</b>	E-mail from E. Kimbrel to X. Wang re Hi	7/29/2010	LE004280	LE004281	<b>Pl. Ex. 019</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); inconsistent with Plaintiffs' Motion in Limine re priv. log.
<b>O</b>	Privilege log for documents redacted or withheld from Leason Ellis in response to Subpoena to S. Cheng	6/7/2019			<b>Pl. Ex. 020</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Privileged; Hearsay.
<b>P</b>	International Patent Publication No. WO 2013/082543 A1	6/6/2013	AIRM00294150	AIRM00294299	<b>Pl. Ex. 021 Def. Ex. 72 [Different Bates]</b>	IO	
<b>Q</b>	E-mail from X. Wang to S. Cheng re Revised Draft Response 10143/003338-US1 attaching Declaration signed by R. Xu	1/13/2017	LE005882	LE005884	<b>Pl. Ex. 022</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); inconsistent with Plaintiffs' Motion in Limine re priv. log.

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<b>R</b>	Markups to reflect Examiner's changes to '551 patent claims				<b>Pl. Ex. 023</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Authentication (FRE 901).
<b>S</b>	Plaintiffs' Amended Notice of Deposition of Xiaofang Wang	6/11/2019			<b>Pl. Ex. 026</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)
<b>T</b>	Plaintiffs' Notice of Deposition to Defendant ImStem Biotechnology, Inc. pursuant to Fed. R. Civ. P. 30(b)(6)	2/6/2019			<b>Pl. Ex. 027</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)
<b>U</b>	E-mail from X. Wang to A. Lazorchak re Biosketch_XiaofangWang attaching X. Wang Biographical Sketch	12/16/2013	IMSTEM-0022291	IMSTEM-0022294	<b>Pl. Ex. 028</b>	H, LA, LF, LK	
<b>V</b>	Defendants Xiaofang Wang and ImStem's Responses to Astellas's First set of Interrogatories (1-21)	3/6/2019			<b>Pl. Ex. 029</b>		Hearsay.
<b>W</b>	E-mail from X. Wang to R. Xu re Slides attaching native presentation High Efficiency Differentiation of T cells from human embryonic stem cells	2/18/2011	IMSTEM-0008154	IMSTEM-0008155	<b>Pl. Ex. 031</b>	H	
<b>X</b>	Presentation High Efficiency differentiation of HSC and MSC from Human Embryonic stem cells feeder free and serum free system	4/5/2011	IMSTEM-0011499	IMSTEM-0011499	<b>Pl. Ex. 032</b>	I	
<b>Y</b>	E-mail from R. Xu to G. Gallo, copying X. Wang, re License Back Request attaching UConn License Back Request	4/12/2013	IMSTEM-0005543	IMSTEM-0005559	<b>Pl. Ex. 034</b>	H, LA, LF, LK	
<b>Z</b>	E-mail from X. Wang to M. Men, R. Xu, and X. Pan re Patent#1 with attachments	7/3/2012	IMSTEM-0031515	IMSTEM-0031532	<b>Pl. Ex. 036</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>AA</b>	E-mail from X. Wang to R. Xu, copying M. Men, re more claims added attaching updated abstract and claims	7/9/2012	IMSTEM-0027835	IMSTEM-0027843	<b>Pl. Ex. 037</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).

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<b>AB</b>	UConn License Back Agreement	4/16/2013	IMSTEM-0019672	IMSTEM-0019675	<b>Pl. Ex. 039</b>	H, LA, LF, LK, IO	
<b>AC</b>	E-mail from X. Chang to X. Wang attaching Excel file MSC EAE	12/7/2010	IMSTEM-0002267	IMSTEM-0002268	<b>Pl. Ex. 043</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>AD</b>	E-mail from X. Wang to R. Xu with Grant Proposal attached	12/1/2010	IMSTEM-0007426	IMSTEM-0007427	<b>Pl. Ex. 044</b>	H, LA, LF, LK	
<b>AE</b>	E-mail from X. Wang to R. Xu re CDMRP eReceipt: You have been added as the Alternate Submitter on application MS 110290 and attachment	7/21/2011	IMSTEM-0008409	IMSTEM-0008412	<b>Pl. Ex. 045</b>		Relevance (FRE 401-402).
<b>AF</b>	Annual Technical Progress Report for Stem Cell Research Grants	9/30/2012	IMSTEM-0020473	IMSTEM-0020481	<b>Pl. Ex. 046</b>	H, LA, LF, LK	
<b>AG</b>	E-mail from R. Xu to S. Bing copying X. Wang re NIH R21 Critiques with attachment	9/14/2011	IMSTEM-0004322	IMSTEM-0004334	<b>Pl. Ex. 047</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay,
<b>AH</b>	E-mail from X. Wang to R. Xu re New Business Plan for TIP attaching July 2012 Business Plan	7/6/2012	IMSTEM-0040373	IMSTEM-0040388	<b>Pl. Ex. 048</b>	H, I, LA, LF, LK	
<b>AI</b>	Regenerative Medicine Research Fund Scientific Research Progress Report	8/30/2016	IMSTEM-0021598	IMSTEM-0021625	<b>Pl. Ex. 049</b>	H, LA	
<b>AJ</b>	E-mail from X. Wang to Dr. Ohno, copying M. Men and A. Lazorchak re NewYork Youngstartup Venture Follow Up attaching Executive summary and presentations	4/3/2014	IMSTEM-0023976	IMSTEM-0024009	<b>Pl. Ex. 050</b>	<b>H, I, LA</b>	
<b>AK</b>	E-mail from X. Wang to R. Xu re MsPlan with presentation and translations attached	9/7/2011	IMSTEM-0008577 AIRM00296707 AIRM00296714	IMSTEM-0008578 AIRM00296707 AIRM00296740	<b>Pl. Ex. 051</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendant's Motion in Limine re China.
<b>AL</b>	E-mail from A. Lazorchak to X. Wang re This is good comment	6/6/2014	IMSTEM-0026597	IMSTEM-0026597	<b>Pl. Ex. 052</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Incomplete Document (FRE 106).
<b>AM</b>	Plaintiffs' Second Amended Notice of Deposition of Michael Men	7/1/2019			<b>Pl. Ex. 053</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)

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<b>AN</b>	E-mail from R. Xu to X. Wang and M. Men re 1st Clinical Trial on hESC progeny attaching embryonic stem cell trials for macular degeneration: a preliminary reprot (Schwartz)	2/13/2012	IMSTEM-0004930	IMSTEM-0004938	<b>Pl. Ex. 055</b>		Relevance (FRE 401-402).
<b>AO</b>	E-mail from X. Wang to S. Cheng and M. Men, copying R. Xu, re ip [REDACTED BY HAND DURING DEPOSITION]	6/15/2012	IMSTEM-0027863	IMSTEM-0027863	<b>Pl. Ex. 057</b> <b>Pl. Ex. 5 (ex. 5 was unredacted version used during Cheng depo)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Privilege; For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>AP</b>	E-mail from M. Men to X. Wang, R. Xu, and X. Pan re provisional filing	7/3/2012	IMSTEM-0027845	IMSTEM-0027845	<b>Pl. Ex. 058</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>AQ</b>	E-mail from M. Men to D. Men and C. Men re Patent#1	7/8/2012	IMSTEM-0031497	IMSTEM-0031497	<b>Pl. Ex. 059</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>AR</b>	E-mail from M. Men to D. Men and C. Men re More Claims added	7/9/2012	IMSTEM-0031479	IMSTEM-0031479	<b>Pl. Ex. 060</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in re '551 patent.
<b>AS</b>	E-mail from X. Wang to X. Pan, M. Men, and R. Xu re Patent#1	7/16/2012	IMSTEM-0031469	IMSTEM-0031469	<b>Pl. Ex. 061</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>AT</b>	E-mail from X. Wang to M. Men re its getting worse for the cgmp group today attaching Stem Cell Revolution	7/31/2012	IMSTEM-0031461	IMSTEM-0031468	<b>Pl. Ex. 062</b>	H, LA, LF, LK	
<b>AU</b>	E-mail from X. Wang to M. Men re contact	8/18/2012	IMSTEM-0027955	IMSTEM-0027956	<b>Pl. Ex. 063</b>	H, LA, LF, LK	
<b>AV</b>	E-mail from R. Xu to S. Donofrio, copying J. Pachter, X. Wang, I. Bates, and R. Xu, re Disease Directed Collaboration Group Proposal attaching proposal	1/4/2013	IMSTEM-0018362	IMSTEM-0018462	<b>Pl. Ex. 064</b>	H	

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<b>AW</b>	E-mail from X. Wang to R. Xu, copying M. Men, re testing iPSC-MSC in EAE	8/5/2013	IMSTEM-0031135	IMSTEM-0031135	<b>Pl. Ex. 065</b>	H, LA, LF, LK	
<b>AX</b>	State of Connecticut Dept. of Public Health Connecticut Stem Cell Research Program	10/24/2013	IMSTEM-0020761	IMSTEM-0020761	<b>Pl. Ex. 067</b>	H, LA, LF, LK	
<b>AY</b>	E-mail from M. Men to C. Men re Cell Stem Cell Paper attaching Cell Stem Cell Paper	3/13/2014	IMSTEM-0030979	IMSTEM-0031055	<b>Pl. Ex. 068</b>	H, LA, LF, LK	
<b>AZ</b>	E-mail from X. Wang to E. Thomson, copying A. Lazorchak and M. Men, re Follow up of ImStem	4/3/2014	IMSTEM-0024010	IMSTEM-0024011	<b>Pl. Ex. 069</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the discussion of China, for reasons stated in Defendants' MIL re China.
<b>BA</b>	ImStem Investment Agreements	12/16/2016	IMSTEM-0045841	IMSTEM-0045916	<b>Pl. Ex. 070</b>	H, LA, LF, LK	
<b>BB</b>	Compilation of eight ImStem Investment Agreements (As used in M. Men Deposition)	12/16/2016	IMSTEM-0045841	IMSTEM-0045916	<b>Pl. Ex. 070</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BC</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045841	IMSTEM-0045849	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.

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<b>BD</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045850	IMSTEM-0045858	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BE</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045859	IMSTEM-0045867	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BF</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045868	IMSTEM-0045876	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BG</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045877	IMSTEM-0045885	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.



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<b>BH</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045886	IMSTEM-0045894	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BI</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045895	IMSTEM-0045906	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BJ</b>	ImStem Biotechnology, Inc. Investment Agreement	12/16/2016	IMSTEM-0045907	IMSTEM-0045916	<b>Pl. Ex. 070 (Excerpt)</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403) & Relevance (FRE 401 & 402) as to the redacted Chinese names, for reasons stated in Defendants' MIL re China. Defendants request that redacted copies be used, as provided to Plaintiffs with these objections.
<b>BK</b>	Plaintiffs' Second Amended Notice of Deposition of Ren-He Xu	7/1/2019			<b>Pl. Ex. 071</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>BL</b>	E-mail from A. Feng to S. Lu re Greetings & a Request	3/5/2010	AIRM00232825	AIRM00232828	<b>Pl. Ex. 073</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>BM</b>	E-mail from R. Xu to S. Lu and J. Lu re Reviews attaching publications	4/2/2010	AIRM00234374	AIRM00234392	<b>Pl. Ex. 074</b>	H, LA, LF, LK, R	
<b>BN</b>	E-mail from R. Xu to X. Wang re R21 attaching R21 proposal	2/11/2011	IMSTEM-0001856	IMSTEM-0001865	<b>Pl. Ex. 076</b>	H, LA, LF, LK	
<b>BO</b>	Connecticut Stem Cell Research Proposal	11/30/2009	IMSTEM-0045961	IMSTEM-0046009	<b>Pl. Ex. 077</b>	H, LA, LF, LK, P	

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<b>BP</b>	E-mail from X. Pan to R. Xu, copying X. Wang, re MSC from ESC	6/7/2011	IMSTEM-0003600	IMSTEM-0003604	<b>Pl. Ex. 079</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>BQ</b>	Mammalian Development article manuscript	3/31/2010	IMSTEM-0045250	IMSTEM-0045292	<b>Pl. Ex. 085</b>	A, H, LA, LF, LK	
<b>BR</b>	Powerpoint presentation in primarily Chinese and minimal English	2009	IMSTEM-0045934	IMSTEM-0045956	<b>Pl. Ex. 086</b>	H, LA, LF, LK, FL	
<b>BS</b>	Powerpoint presentation in primarily Chinese and minimal English	2009	IMSTEM-0045917	IMSTEM-0045933	<b>Pl. Ex. 087</b>	H, LA, LF, LK, FL	
<b>BT</b>	Unredacted X. Wang Lab notebook no. 31	3/12/2010	IMSTEM-0042945	IMSTEM-0043138	<b>Pl. Ex. 088</b>	H, I, LA, LF, LK	
<b>BU</b>	Unredacted X. Wang Lab notebook no. 36	4/23/2012	IMSTEM-0041825	IMSTEM-0041904	<b>Pl. Ex. 089</b>	H, LA, LF, LK	
<b>BV</b>	Unredacted A. Lazorchak Lab Notebook	5/17/2013	IMSTEM-0041698	IMSTEM-0041788	<b>Pl. Ex. 090</b>		Relevance (FRE 401-402).
<b>BW</b>	E-mail from R. Xu to X. Li and X. Wang, copying K. Martins-Taylor, re Chapter attaching Chapter guidelines and outline	2/2/2010	IMSTEM-0042770	IMSTEM-0042773	<b>Pl. Ex. 091</b>	<b>H</b>	
<b>BX</b>	E-mail from R. Xu to X. Wang, copying K. Martins-Taylor, re Chapter	3/3/2010	IMSTEM-0042541	IMSTEM-0042541	<b>Pl. Ex. 092</b>	H, LA, LF, LK	
<b>BY</b>	E-mail from R. Xu to X. Wang re Book Chapter attaching draft book chapter	4/27/2010	IMSTEM-0042912	IMSTEM-0042944	<b>Pl. Ex. 093</b>	H, LA, LF, LK	
<b>BZ</b>	E-mail from R. Xu to Y. Khan, copying X. Li and X. Wang re Revised Book Chapter attaching revised book chapter and figures	5/7/2010	IMSTEM-0042283	IMSTEM-0042383	<b>Pl. Ex. 094</b>	<b>H, LA, P</b>	
<b>CA</b>	ImStem and X. Wang Answer and Counterclaims [Dkt. no. 20] with exhibits	1/10/2018			<b>Pl. Ex. 095</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)
<b>CB</b>	Redlined version of Defendants' Answer and Amended Counterclaims [Dkt. No. 71-2]	7/22/2019			<b>Pl. Ex. 096</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)
<b>CC</b>	E-mail from R. Xu to S. Lu, E. Kimbrel, B. Su, and X. Wang re proposal submitted attaching CT proposal rx 011411	1/14/2011	AIRM00014753	AIRM00014768	<b>Pl. Ex. 097 Lu Ex. 11</b>	H, LA, LF, LK	
<b>CD</b>	E-mail from R. Xu to X. Wang re Visa	12/30/2009	IMSTEM-0042855	IMSTEM-0042855	<b>Pl. Ex. 098</b>	H, LA, LF, LK, P	

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<b>CE</b>	2013 ImStem Income Tax Return	3/26/2014	IMSTEM-0045409	IMSTEM-0045458	<b>Pl. Ex. 099</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CF</b>	2014 ImStem Income Tax Return	8/30/2015	IMSTEM-0045459	IMSTEM-0045504	<b>Pl. Ex. 100</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CG</b>	2015 ImStem Income Tax Return	9/3/2016	IMSTEM-0045505	IMSTEM-0045553	<b>Pl. Ex. 101</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CH</b>	2016 ImStem Income Tax Return	7/26/2017	IMSTEM-0045554	IMSTEM-0045689	<b>Pl. Ex. 102</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CI</b>	2017 ImStem Income Tax Return	7/19/2018	IMSTEM-0045690	IMSTEM-0045831	<b>Pl. Ex. 103</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CJ</b>	Defendants' Amended Answer and Counterclaims	8/28/2019			<b>Pl. Ex. 104</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>CK</b>	CT Stem Cell Research Proposal	1/13/2012	IMSTEM-0040110	IMSTEM-0040141	<b>Pl. Ex. 105</b>		Relevance (FRE 401-402).
<b>CL</b>	E-mail from E. Kimbrel to X. Wang re In Vitro Data Disclosure attaching presentation	4/3/2012	AIRM00050758	AIRM00050766	<b>Pl. Ex. 106</b>		Hearsay.
<b>CM</b>	E-mail from E. Kimbrel to X. Wang re Data and Materials and methods with attachment	2/14/2013	IMSTEM-0006780 IMSTEM-0006784	IMSTEM-0006780 IMSTEM-0006787	<b>Pl. Ex. 107</b>		Relevance (FRE 401-402).
<b>CN</b>	E-mail from R. Xu to G. Gallo, copying X. Wang, re disclosure attaching disclosure	6/6/2012	IMSTEM-0018163	IMSTEM-0018178	<b>pl. ex. 114</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); For reasons stated in Defendants' Motion in Limine re '551 patent.
<b>CO</b>	Binding Term Sheet (SCRMI, CHA and ACT)	7/13/2011	AIRM00296388	AIRM00296403	<b>Pl. Ex. 115</b>	R, P, H, LF, LK	
<b>CP</b>	Purchase Agreement among Astellas, CHA Biotech and CHA University	6/24/2019	AIRM00297826	AIRM00297897	<b>Pl. Ex. 116 Cassidy Ex. 08</b>	R, P, LF, LK, H, LA	
<b>CQ</b>	Licensing Executives Society Biotech Survey	2016	N/A		<b>Pl. Ex. 117</b>	R, H, LF, P, IO	

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CR	Article: Gimble, et al. In vitro Differentiation Potential of Mesenchymal Stem Cells," Transfusion Medicine and Hemotherapy	5/8/2008	N/A		Pl. Ex. 125	R, H, IO, P	
CS	Article: Staszkievicz, et al. Cell Growth Characteristics, Differentiation Frequency, and Immunophenotype of Adult Ear Mesenchymal Stem Cells. Stem Cells and Development	4/28/2009	N/A		Pl. Ex. 128	R, H, IO, P	
CT	Dreesen, O. & Brivanlou, A.H., Signaling Pathways in Cancer and Embryonic Stem Cells, <i>Stem Cell Reviews</i> , 3(1): 7-17 (2007)	2007	AIRM00298473	AIRM00298484	Pl. Ex. 131	H, IO	
CU	U.S. Patent No. 8,431,395	4/30/2009	N/A		Pl. Ex. 133 Brivanlou Ex. 7	R, H, IO, P	
CV	Article: Luis, et al. Canonical Wnt Signaling Regulates Hematopoiesis in a Dosage-Dependent Fashion. Cell Press	10/7/2011	N/A		Pl. Ex. 135	R, P, H, IO	
CW	Article: Perry, et al. Cooperation between both Wnt/B-catenin and PTEN/P13K/Akt signaling promotes primitive hematopoietic stem cell self-renewal and expansion. Genes & Development	9/2/2011	N/A		Pl. Ex. 136	R, P, H, IO, DU	
CX	U.S. Patent No. 8,263,403	9/11/2012	N/A		Pl. Ex. 137	R, P, H, IO	
CY	E-mail from E. Kimbrel to X. Wang re Hi attaching publications and MSCs slide	7/29/2010	IMSTEM-0000969	IMSTEM-0000985	Brivanlou Ex. 6		Incomplete Document (FRE 106).
CZ	Article: "Human Umbilical Cord Mesenchymal Stem Cells hUC-MSCs Exert ...," Chen et al., Clinical Immunology	3/5/2010	AIRM00224674	AIRM00224684	Bunnell Ex. 127	R, P, H, IO	
DA	Email from L. Jooste to M. Vincent, E. Kimbrel, R. Lanza re: Ocata - MSC Program; with attachments	2/21/2015	AIRM00043565	AIRM00043609	Cassidy Ex. 003	R, P, LK, LF, H	
DB	Email from Kimbrel to BHahn@mednet.ucla.edu re ACT's hESC-MSCs for lupus	2/5/2015	AIRM00065317	AIRM00065319	Cassidy Ex. 005	R, P, LK, LF, H	

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<b>DC</b>	Astellas Financial Statements (produced in native)	2/28/2018	AIRM00298227	AIRM00298227	<b>Cassidy Ex. 011</b>	H, LA, LF, LK	
<b>DD</b>	AIRM Custom Income Statements From Jan 2015 to Feb 2018 (print of native version marked as depo exhibit)		AIRM00298227	AIRM00298227	<b>Cassidy Ex. 011</b>	H, LA, LF, LK	
<b>DE</b>	Chart of Time Spent on MS/EAE Strategy, Preparing cells, assays, data, for UConn Collaboration				<b>Cassidy Ex. 02</b>		Authentication (FRE 901).
<b>DF</b>	J. Chu LinkedIn				<b>Chu Ex. 01</b>		Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>DG</b>	E-mail from E. Kimbrel to J. Chu re Protocols attaching protocols	12/5/2011	AIRM00049918	AIRM00049922	<b>Chu Ex. 02</b>		Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>DH</b>	Notebook No. A 172 issued to Janny Chu	12/9/2011	AIRM00263226	AIRM00263375	<b>Chu Ex. 04</b>	R, P, H, LF, LK	
<b>DI</b>	E-mail from J. Chu to E. Kimbrel re Cell proliferation data attaching Board Meeting 052012 JChu ppt	5/2/2012	AIRM00017155	AIRM00017159	<b>Chu Ex. 06</b>		Hearsay.
<b>DJ</b>	E-mail from E. Kimbrel to J. Chu and N. Kouris re MSC cell surface proteome attaching publication	8/7/2012	AIRM00051583	AIRM00051593	<b>Chu Ex. 07</b>	H, LA, LF, LK	
<b>DK</b>	J. Chu Notebook No. A182	8/15/2012	AIRM00249942	AIRM00250130	<b>Chu Ex. 08</b>	H, LA, LF, LK	
<b>DL</b>	E-mail from J. Chu to E. Kimbrel re CD10 and Stro-1? Attaching Patent & Board Meeting 111612 JChu	11/20/2012	AIRM00024457	AIRM00024464	<b>Chu Ex. 09</b>	H, LA, LF, LK	
<b>DM</b>	E-mail from J. Chu to S. Lu re Lab meeting slides attaching slides	12/31/2012	AIRM00225945	AIRM00225965	<b>Chu Ex. 10</b>	H, LA, LF, LK	
<b>DN</b>	Email from Chu to Kimbrel re data; attachment Flow data FM MSCs.pptx	2/5/2013	AIRM00025892	AIRM00025895	<b>Chu Ex. 11</b>	R, P, H, LF, LK	
<b>DO</b>	E-mail from J. Chu to E. Kimbrel re Data attaching Flow A and J Excel	2/6/2013	AIRM00025903	AIRM00025905	<b>Chu Ex. 12</b>	H, LA, LF, LK	
<b>DP</b>	Email from Kimbrel to Chu re data	2/6/2013	AIRM00053010	AIRM00053011	<b>Chu Ex. 13</b>	R, P, H, LF, LK	
<b>DQ</b>	Email from Kouris to Kimbrel re Janny	10/8/2013	AIRM00034074	AIRM00034074	<b>Chu Ex. 14</b>	R, P, LK, LF, H	
<b>DR</b>	Presentation Progress report by S. Lu	2/5/2010	AIRM00207881	AIRM00207895	<b>Def. Ex. 066 Lu Ex. 7</b>	H, LA, LF, LK, I	

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<b>DS</b>	E-mail from S. Lu to E. Kimbrel re meeting with UConn Folks attaching protocols for BL-Revised 4-2-09	8/11/2010	AIRM00013971	AIRM00013972	<b>Def. Ex. 068</b>		Hearsay.
<b>DT</b>	Plaintiffs' Objections and Responses to Defendants' First set of Interrogatories (1-10)	4/4/2019			<b>Def. Ex. 069</b>	BE, R, H, P, LA, LF, LK, IO	Hearsay.
<b>DU</b>	International App PCT/US2013/048291	6/27/2013			<b>Def. Ex. 073</b>		For reasons stated in Defendants' Motion in Limine re other patent.
<b>DV</b>	Email from Vincent to Lu re UConn collaborators' new company	5/28/2013	AIRM00093176	AIRM00093177	<b>Def. Ex. 075</b>	R, P, H, DU, LF, LK	
<b>DW</b>	Email from sasseedog@aol.com (Fred) to Lanza re Dr. Xu	9/25/2013	AIRM00094808	AIRM00094809	<b>Def. Ex. 076</b>	R, P, H, LK, LF	
<b>DX</b>	Article: "Human ESC-Derived MSCs Outperform Bone Marrow MSCs in the Treatment of an EAE Model of Multiple Sclerosis," Stem Cell Reports	7/8/2014	AIRM00076995	AIRM00077010	<b>Def. Ex. 078</b>	IO, R, P, H	
<b>DY</b>	E-mail from R. Lanza to R. Xu and E. Kimbrel, copying S. Lu and X. Wang re ???!	3/24/2014	AIRM00038112	AIRM00038112	<b>Def. Ex. 079</b>	H, LA, LF, LK, P	
<b>DZ</b>	E-mail from R. Lanza to R. Xu, S. Crocker, J. Pachter, X. Wang and A. Lazorchak, copying E. Kimbrel and S. Lu re Cell Stem Cell Editorial Decision	3/29/2014	AIRM00038243	AIRM00038248	<b>Def. Ex. 080</b>	H, LA, LF, LK, P	
<b>EA</b>	Email from Lanza to Knoepfler re Dr. Ren-He Xu and Dr. Xiaofang Wang/BTW	6/9/2014	AIRM00146897	AIRM00146903	<b>Def. Ex. 081</b>	R, H, P, LK, LF	
<b>EB</b>	Email from Vincent to Heffernan re What rights do we have...	6/5/2014	AIRM00269171	AIRM00269172	<b>Def. Ex. 082</b>	R, H, P, LK, LF	
<b>EC</b>	Email from Vincent to Heffernan re What rights do we have...	6/5/2014	AIRM00097117	AIRM00097120	<b>Def. Ex. 083</b>	R, H, P, LK, LF, DU	
<b>ED</b>	Email from Lanza to Jooste re Imstem	2/5/2016	AIRM00131010	AIRM00131011	<b>Def. Ex. 084</b>	R, P, LK, LF, H	
<b>EE</b>	Lab Notebook No. 174 Issued to Nick Kouris	2/29/2012	AIRM00250289	AIRM00250489	<b>Def. Ex. 089</b>	R, P, H, LF, LK	
<b>EF</b>	Email from Kouris to Kouris, Kimbrel, Lanza, Lu, and Chu re UCLA	7/26/2012	AIRM00020601	AIRM00020605	<b>Def. Ex. 090</b>	R, P, H, LF, LK	
<b>EG</b>	Native excel Mean Intensities	9/26/2012	AIRM00262767	AIRM00262767	<b>Def. Ex. 091</b>	H, LA, LF, LK	
<b>EH</b>	Email from Kouris to Lu re CD10	9/28/2012	AIRM00225905	AIRM00225906	<b>Def. Ex. 092</b>	R, P, H, LF, LK	

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<b>EI</b>	Abstract for Ordi, et al. CD10 expression in epithelial tissues and tumors of the gynecologic tract: a useful marker in the diagnosis of mesonephric, trophoblastic, and clear cell tumors	Feb-03	N/A		<b>Def. Ex. 093</b>	R, H, IO, P	
<b>EJ</b>	Email from Kouris to Kimbrel re CD10; attachments	9/28/2012	AIRM00022881	AIRM00022899	<b>Def. Ex. 094</b>	R, P, H, LF, LK	
<b>EK</b>	Abstract for Young, et al. Human pluripotent and progenitor cells display cell surface cluster differentiation markers CD10, CD13, CD56, and MHC class-I	May-99	N/A		<b>Def. Ex. 095</b>	R, H, IO, P	
<b>EL</b>	Email from Lu to Kimbrel et al. re Review paper on MSC surface markers; attachment	10/12/2012	AIRM00023607	AIRM00023615	<b>Def. Ex. 096</b>	R, P, H, LF, LK	
<b>EM</b>	Email from Kouris to Lu and Kimbrel re: 10.11.12 Nick's LM Presentation; attachment	10/11/2012	AIRM00023558	AIRM00023576	<b>Def. Ex. 097</b>	R, P, H, LF, LK	
<b>EN</b>	E-mail from E. Kimbrel to N. Kouris re Hooke Lab - EAE	5/28/2012	AIRM00051261	AIRM00051261	<b>Def. Ex. 098</b>	H, LA, LF, LK	
<b>EO</b>	Email from Lu to Kouris and Kimbrel re R20120529-1, INTERIM 7.6.12	7/6/2012	AIRM00019878	AIRM00019880	<b>Def. Ex. 099</b>	R, P, H, LF, LK	
<b>EP</b>	Email from Kimbrel to Kouris re (start of thread references FW: Report - EAE study in C57BL/6 mice (20120529-1))	9/26/2012	AIRM00052211	AIRM00052213	<b>Def. Ex. 100</b>	R, P, H, LF, LK	
<b>EQ</b>	Email from Kouris to Kimbrel re MSC team	7/17/2012	AIRM00020016	AIRM00020018	<b>Def. Ex. 101</b>	R, P, H, LF, LK	
<b>ER</b>	Email from Martins-Taylor to Wang and Li re Stem cell chapter	4/30/2010	IMSTEM-0000702	IMSTEM-0000739	<b>Fortier Ex. 011</b>	R, P, H, LF, LK	
<b>ES</b>	Printout of the home page of the Cornell Equine Park website (Fortier 009)	12/4/2019	N/A		<b>Fortier Ex. 09</b>	R, H, P, A	
<b>ET</b>	Printout of several pages of from the Cornell Equine Park website (Fortier 010)	12/4/2019	N/A		<b>Fortier Ex. 10</b>	R, H, P, A	
<b>EU</b>	Email from Xu to Wang re Update proposal; attached draft grant application language	1/2/2011	IMSTEM-0001734	IMSTEM-0001751	<b>Fortier Ex. 12</b>	R, P, H, IO, LF, LK	

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<b>EV</b>	E-mail from J. Lu to A. Feng, F. Li, H. Yin, E. Kimbrel, B. Chiswell, W. Wang, T. Kelley, and H. Kim re progress report, attaching progress report	1/29/2010	AIRM00013414	AIRM00013429	<b>Lu Ex. 02</b>	H, LA, LF, LK	
<b>EW</b>	E-mail from S. Lu to E. Kimbrel re meeting with UConn Folks attaching protocols for BL-Revised 4-2-09	8/11/2010	AIRM00013971	AIRM00013971	<b>Lu Ex. 04</b>		Hearsay.
<b>EX</b>	Email from Xu to Wang re: CT proposal with attached proposal	12/29/2010	IMSTEM-0017662	IMSTEM-0017679	<b>Lu Ex. 10</b>	R, P, H, IO, LF, LK	
<b>EY</b>	Transcript of March 2018 Conversation between T. Shannon and J. Lu	3/1/2018	LU-00000003	LU-00000090	<b>Lu Ex. 14</b>	BE, H, LA, LF, LK, P, R	
<b>EZ</b>	E-mail from J. Lu to A. Feng, F. Li, and E. Kimbrel re Pluristem attaching PTSI Pluristem Company Profile	9/21/2009	AIRM00013304	AIRM00013310	<b>Lu Ex. 16</b>		Hearsay.
<b>FA</b>	Garde, D., Astellas finally wraps up its \$379M deal for Ocata, FierceBiotech	2/10/2016	AIRM00299254	AIRM00299257		H	
<b>FB</b>	Defendants' Amended Objections and Responses to Astellas' First Set of Interrogatories (1-21)	10/15/2019				H	Hearsay.
<b>FC</b>	Native excel MSC_COMPARE_062112-small	6/22/2012	IMSTEM-0011870	IMSTEM-0011870		H, LA, LF, LK	
<b>FD</b>	R. Xu and X. Wang book chapter - Stem Cells and Tissue Regeneration	1/1/2013	AIRM00297929	AIRM00297958		P, H	
<b>FE</b>	E-mail from R. Xu to S. Lu, E. Kimbrel, B. Su, and X. Wang re proposal submitted attaching CT proposal rx 010711	1/7/2011	AIRM00014702	AIRM00014721		H, LA, LF, LK	
<b>FF</b>	E-mail from E. Kimbrel to R. Xu, copying J. Lu, with attachment	1/10/2011	AIRM00233553	AIRM00233572		H, LA, LF, LK	
<b>FG</b>	File History for U.S. Patent No. 8,961,956 (U.S. Patent Appl. 13/905,526)	5/30/2013	AIRM00295993	AIRM00296309		IO	
<b>FH</b>	E-mail from E. Kimbrel to X. Wang re next round of mice	11/17/2012	IMSTEM-0004568	IMSTEM-0004569		H, LA, LF, LK	
<b>FI</b>	E-mail from E. Kimbrel to X. Wang re how'd it go?	3/19/2012	IMSTEM-0005291	IMSTEM-0005292		H, LA, LF, LK	
<b>FJ</b>	E-mail from E. Kimbrel to R. Xu re data?	4/12/2012	IMSTEM-0005351	IMSTEM-0005353		H, LA, LF, LK	



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<b>FK</b>	E-mail from E. Kimbrel to X. Wang re new experiment	1/10/2013	IMSTEM-0006395	IMSTEM-0006396		H, LA, LF, LK	
<b>FL</b>	E-mail from X. Wang to R. Xu re MSC protocol with attached protocols	4/5/2012	IMSTEM-0008919	IMSTEM-0008921		H, LA, LF, LK	
<b>FM</b>	E-mail from R. Xu to X. Wang re Aim 1.1 drafted attaching specific aim 1	12/29/2012	IMSTEM-0017312	IMSTEM-0017323		H, LA, LF, LK	
<b>FN</b>	E-mail from X. Wang to R. Xu re aim 1 and 3 latest version attaching draft Aims	1/2/2013	IMSTEM-0018948	IMSTEM-0018971		H, LA, LF, LK	
<b>FO</b>	E-mail from X. Wang to R. Xu re a few add on to 1.1c attaching draft aims	1/1/2013	IMSTEM-0018972	IMSTEM-0018988		H, LA, LF, LK	
<b>FP</b>	E-mail from X. Wang to R. Xu re modified aim 1 attaching draft aim	1/1/2013	IMSTEM-0018989	IMSTEM-0019005		H, LA, LF, LK	
<b>FQ</b>	Annual Technical Progress Report for Stem Cell Research Grants	9/30/2015	IMSTEM-0020962	IMSTEM-0020986		H, LA, LF, LK	
<b>FR</b>	Annual technical progress report for Stem Cell Research Grants	9/30/2014	IMSTEM-0021416	IMSTEM-0021469		H, LA, LF, LK	
<b>FS</b>	Plaintiffs' Objections and Responses to Defendants' Fifth Set of Interrogatories (30-34)	10/11/2019				BE, R, H, P, IO, LA, LF, LK	Hearsay.
<b>FT</b>	Plaintiffs' Objections and Responses to Defendants' Second Set of Interrogatories (Nos. 11-25)	5/2/2019				BE, R, H, P, IO, LA, LF, LK	Hearsay.
<b>FU</b>	Plaintiffs' Objections and Responses to Defendants' Third Set of Interrogatories (Nos. 26-28)	6/27/2019				BE, R, H, P, IO, LA, LF, LK	Hearsay.
<b>FV</b>	Email from Mary Fleishell to Erin Kimbrel; withheld as privileged--attaching WO 2014/011407 A2	2/21/2014	AIRM00037250	AIRM00037387		AC, A, BE, H, LA, LF, LK, MIL, NP, P, R	
<b>FW</b>	E-mail from E. Kimbrel to J. Lu re use of irradiated MSCs with publications attached	8/11/2011	AIRM00049373	AIRM00049402		H, I, LA, LF, LK	
<b>FX</b>	Harnessing the Power of Mesenchymal Stromal Cells - Lab meeting presentation	8/19/2011	AIRM00180701	AIRM00180727		P, I	
<b>FY</b>	E-mail from E. Kimbrel to J. Lu with attachment	12/14/2010	AIRM00233145	AIRM00233176		H, I, LA, LF, LK	
<b>FZ</b>	Email from Kimbrel to Lu re (blank)	12/14/2010	AIRM00233145	AIRM00233147		H, I, LA, LF, LK	

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GA	321 and '956 Patent assignments dates of Feb/Mar 2014, Nov 2014 and May 2016	5/2/2016	AIRM00297766 AIRM00297769 AIRM00297774	AIRM00297768 AIRM00297773 AIRM00297780		H, IS, LA, LF, LK, MD, NP	
GB	U.S. Patent 9,725,698	8/8/2017	AIRM00299694	AIRM00299739		IO	
GC	Article: Wang, et al. Human ESC-Derived MSCs Outperform Bone Marrow MSCs in the Treatment of an EAE Model of Multiple Sclerosis, Stem Cell Reports v.3, 115-130	7/8/2014	IMSTEM-0019516	IMSTEM-0019546		IO, H, I	
GD	2012 Grant Application	1/13/2012	IMSTEM-0040209	IMSTEM-0040281		H, I, LA	
GE	Article: Martins-Taylor, et al. <i>Stem Cells and Tissue Regeneration Chapter 3</i>	11/12/2012	IMSTEM-0041795	IMSTEM-0041824		P, H	
GF	Astellas Acquires Universal Cells, Inc., Astellas Pharma Inc	2/13/2018	AIRM00298832	AIRM00298833			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GG	Squillaro, T., Clinical Trials With Mesenchymal Stem Cells: An Update, Cell Transplantation, Vol. 25:829-848 (2016)	2016	AIRM00298848	AIRM00298867			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GH	History ImStem Website		AIRM00298877	AIRM00298877			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GI	Astellas Annual Report 2018	2018	AIRM00299096	AIRM00299253			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; inconsistent with Plaintiffs' Motion in Limine re corporate size.
GJ	Global Regenerative Medicine Market Will Reach USD 48.97 Billion By 2025, Zion Market Research	5/30/2019	AIRM00299258	AIRM00299260			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GK	Kemp, P., History of regenerative medicine: looking backwards to move forwards, Regenerative Med. 1(5), 653-69 (2006)	2006	AIRM00299261	AIRM00299277			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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GL	E-mail from R. Xu to X. Wang re MSC-BP attaching a draft business plan	3/9/2012	IMSTEM-0040473	IMSTEM-0040491			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
GM	Initiatives in Cell Therapy, R&D Meeting - December 13, 2018, Astellas	12/13/2018	AIRM00298882	AIRM00298941			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GN	Xu, C. & Carpenter, M.K., Feeder-Free Culture, in Handbook of Stem Cells Vol. 1 Embryonic, 535-42 (Lanza, R., et al. eds., 2004)	1/1/2004	AIRM00289941	AIRM00289947			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GO	Klimanskaya, I., et al., Human Embryonic Stem Cell Lines Derived from Single Blastomeres, Nature, 444:481-485 (2006)	1/1/2006	AIRM00290120	AIRM00290125			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GP	Klimanskaya, I. et al., Human Embryonic Stem Cells Derived Without Feeder Cells, Lancet, 365:1636-41 (2005)	1/1/2005	AIRM00290132	AIRM00290138			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GQ	Defendant Ren-He Xu's Responses to Astellas' First set of Interrogatories (1-21)	3/6/2019					Hearsay.
GR	Trivedi, P. & Hematti P., Derivation and immunological characterization of mesenchymal stromal cells from human embryonic stem cells, <i>Experimental Hematology</i> , 36:350-359 (2008)	1/1/2008	AIRM00171102	AIRM00171111			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GS	Di Nicola, M. et al., Human bone marrow stromal cells suppress T-lymphocyte proliferation induced by cellular or nonspecific mitogenic stimuli, Blood, 99:3838-3843 (2002)	1/1/2002	AIRM00259954	AIRM00259960			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GT	E-mail from E. Kimbrel to X. Wang re in vitro data disclosure with attachments	4/3/2012	IMSTEM-0005455	IMSTEM-0005458			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
GU	E-mail from E. Kimbrel to X. Wang re Astellas approving \$10,000 budget upon Dr. Wang's request to order hES culture reagents	8/23/2012	IMSTEM-0005999	IMSTEM-0006001			Relevance (FRE 401-402).
GV	E-mail from E. Kimbrel to X. Wang re order EAE Induction Kit	1/28/2013	IMSTEM-0006192	IMSTEM-0006192			Relevance (FRE 401-402).

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GW	E-mail from X. Wang to R. Xu re FW: data and info for grants with attached slides	3/28/2011	IMSTEM-0007990	IMSTEM-0007994			Incomplete Document (FRE 106),
GX	E-mail from X. Wang to E. Kimbrel re leaving around 11:30am	4/23/2012	IMSTEM-0009014	IMSTEM-0009015			Relevance (FRE 401-402).
GY	Bocelli-Tyndall, C. et al., Bone marrow mesenchymal stromal cells (BM-MSCs) from healthy donors and auto-immune disease patients reduce the proliferation of autologous- and allogeneic-stimulated lymphocytes in vitro, <i>Rheumatology</i> , 46:403-408 (2007)	2007	AIRM00298300	AIRM00298305			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
GZ	Fujikawa, T. et al., Teratoma Formation Leads to Failure of Treatment for Type I Diabetes Using Embryonic Stem Cell-Derived Insulin-Producing Cells, <i>Am. J. Pathology</i> , 166(6):1781-1791 (2005)	2005	AIRM00298536	AIRM00298546			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HA	Gotherstrom, C. et al., Immunomodulatory effects of human foetal liver-derived mesenchymal stem cells, <i>Bone Marrow Transplantation</i> , 32:265-272 (2003)	2003	AIRM00298556	AIRM00298563			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HB	Hentze, H. et al., Cell therapy and the safety of embryonic stem cell-derived grafts, <i>Trends in Biotechnology</i> , 25:24-32 (2007)	2007	AIRM00298575	AIRM00298583			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HC	Li, C.D. et al., Mesenchymal stem cells derived from human placenta suppress allogeneic umbilical cord blood lymphocyte proliferation, <i>Cell Res.</i> , 15(7):539-547 (2005)	2005	AIRM00298595	AIRM00298603			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HD	Blum, B. & Benvenisty, N., The Tumorigenicity of Human Embryonic Stem Cells, <i>Advances in Cancer Res.</i> , 100:133-158 (2008)	1/1/2008	AIRM00299380	AIRM00299405			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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HE	Gerdoni, E. et al., Mesenchymal Stem Cells Effectively Modulate Pathogenic Immune Response in Experimental Autoimmune Encephalomyelitis, <i>Annals of Neurol.</i> , 61(3):219-227 (2007)	1/1/2007	AIRM00299406	AIRM00299414			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HF	Haynesworth, S. et al., Cytokine Expression by Human Marrow-Derived Mesenchymal Progenitor Cells In Vitro: Effects of Dexamethasone and IL-1 alpha, <i>J. Cell Physiol.</i> , 166:585-592 (1996)	1/1/1996	AIRM00299422	AIRM00299429			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HG	Heng, B. et al., Transplanted human embryonic stem cells as biological 'catalysts' for tissue repair and regeneration, <i>Med. Hypotheses</i> , 64(6):1085-1088 (2005)	1/1/2005	AIRM00299430	AIRM00299433			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HH	Ishihara, K. & Hirano, T., IL-6 in autoimmune disease and chronic inflammatory proliferative disease, <i>Cytokine &amp; Growth Factor Revs.</i> , 13:357-368 (2002)	1/1/2002	AIRM00299434	AIRM00299445			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HI	Karussis, D. & Kassis, I., The potential use of stem cells in multiple sclerosis: An overview of the preclinical experience, <i>Clinical Neurol. and Neurosurgery</i> , 110:889-896 (2008)	1/1/2008	AIRM00299460	AIRM00299467			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HJ	Kassis, I. et al., Neuroprotection and Immunomodulation with mesenchymal stem cells in chronic experimental autoimmune encephalomyelitis, <i>Arch Neurol</i> , 2008 65(6):753-61 (2008)	1/1/2008	AIRM00299468	AIRM00299476			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HK	Liang, J. et al., Allogeneic mesenchymal stem cells transplantation in treatment of multiple sclerosis, <i>Multiple Sclerosis J.</i> , 15:644-646 (2009)	1/1/2009	AIRM00299477	AIRM00299480			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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HL	Mohyeddin, B. et al., Mesenchymal Stem Cell Therapy for Multiple Sclerosis, <i>Int'l J. of Hematology-Oncology and Stem Cell Res.</i> , 2(5):10-15 (2005)	1/1/2005	AIRM00299501	AIRM00299505			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HM	Mohyeddin, B. et al., Does Mesenchymal Stem Cell Therapy Help Multiple Sclerosis Patients? Report of a Pilot Study, <i>Iranian J. of Immunol.</i> , 4(1):50-57 (2007)	1/1/2007	AIRM00299506	AIRM00299513			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HN	Park, C.W. et al., Cytokine Secretion Profiling of Human Mesenchymal Stem Cells by Antibody Array, <i>Int'l J. of Stem Cells</i> , 2(1):59-68 (2009)	1/1/2009	AIRM00299538	AIRM00299547			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HO	Potian, J.A. et al., Veto-Like Activity of Mesenchymal Stem Cells: Functional Discrimination Between Cellular Responses to Alloantigens and Recall Antigens, <i>J Immunol.</i> , 171:3426-3434 (2003)	1/1/2003	AIRM00299548	AIRM00299557			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HP	Qiao, C., et al., Human mesenchymal stem cells isolated from the umbilical cord, <i>Cell Bio. Int'l</i> , 32:8-15 (2008)	1/1/2008	AIRM00299558	AIRM00299565			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HQ	Rasmusson, I. et al., Mesenchymal Stem Cells Inhibit The Formation of Cytotoxic T Lymphocytes, But Not Activated Cytotoxic T Lymphocytes or Natural Killer Cells, <i>Transplantation</i> , 76:1208-1213 (2003)	10/27/2003	AIRM00299566	AIRM00299571			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HR	Samoilova, E.B. et al., IL-6-Deficient Mice Are Resistant to Experimental Autoimmune Encephalomyelitis: Roles of IL-6 in the Activation and Differentiation of Autoreactive T Cells, <i>J. of Immunol.</i> , 161:6480-6486 (1998)	1/1/1998	AIRM00299572	AIRM00299579			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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HS	Slavin, S. et al., The potential use of adult stem cells for the treatment of multiple sclerosis and other neurodegenerative disorders, <i>Clinical Neurol. and Neurosurgery</i> , 110:943-946 (2008)	1/1/2008	AIRM00299580	AIRM00299583			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HT	Tan, Z. et al., Immunomodulative effects of mesenchymal stem cells derived from human embryonic stem cells in vivo and in vitro, <i>J. of Zhejiang U.</i> , 12(1):18-27 (2010)	1/1/2011	AIRM00299584	AIRM00299593			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HU	Zhang, J. et al, Human bone marrow stromal cell treatment improves neurological functional recovery in EAE mice, <i>Experimental Neurol.</i> , 195:16-26 (2005)	5/17/2005	AIRM00299602	AIRM00299612			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HV	Dicker, A. et al., Functional studies of mesenchymal stem cells derived from adult human adipose tissue, <i>Experimental Cell Res.</i> , 308:283-290 (2005)	5/31/2005	AIRM00299621	AIRM00299628			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HW	Lock, C. et al., Gene-microarray analysis of multiple sclerosis lesions yields new targets validated in autoimmune encephalomyelitis, <i>Nature Med.</i> , 8(5):500-508 (2002)	5/1/2002	AIRM00299629	AIRM00299637			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HX	Leblanc et al., Mesenchymal Stem Cells Inhibit and Stimulate Mixed Lymphocyte Cultures and Mitogenic Responses Independently of the Major Histocompatibility Complex, <i>Scandinavian J. of Immunol.</i> , 57:11-20 (2003)	1/1/2003	AIRM00299638	AIRM00299647			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
HY	E-mail from RayBiotech to E. Kimbrell re price estimate for custom array with attachment	2/7/2012	AIRM00297340	AIRM00297347			Relevance (FRE 401-402).
HZ	ACT Purchase Requisition Form	2/9/2012	AIRM00170061	AIRM00170061			Relevance (FRE 401-402); Incomplete Document (FRE 106).
IA	SCRMI Progress Report by J. Lu	5/1/2010	AIRM00281769	AIRM00281791			Relevance (FRE 401-402).

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<b>IB</b>	E-mail from R. Xu to S. Lu and E. Kimbrel, copying X. Wang, re in vivo MSC collaboration	11/30/2011	AIRM00016052	AIRM00016054			Hearsay.
<b>IC</b>	Robert Lanza Updated Curriculum Vitae						Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>ID</b>	E-mail from X. Wang to E. Kimbrel, copying R. Xu re any word? Attaching EAE data excel	5/23/2013	AIRM00029266	AIRM00029267			Hearsay.
<b>IE</b>	E-mail from X. Wang to E. Kimbrel re Queries for your article in Stem Cell Reports (Stemcr140)	5/2/2014	AIRM00039057	AIRM00039059			Relevance.
<b>IF</b>	E-mail from R. Lanza to R. Lanza re CV attaching CV	5/24/2016	AIRM00086077	AIRM00086110			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>IG</b>	E-mail from R. Levinson to E. Kimbrel, R. Lanza, and others re MSC uveitis with attachments	8/19/2013	AIRM00142756	AIRM00142785			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>IH</b>	Gonzalez, M.A., et al., Treatment of Experimental Arthritis by Inducing Immune Tolerance With Human Adipose-Derived Mesenchymal Stem Cells, <i>Arthritis &amp; Rheumatism</i> , 60(4):1006-1019 (2009)	1/1/2009	AIRM00170616	AIRM00170629			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>II</b>	Yamout, B. et al., Bone marrow mesenchymal stem cell transplantation in patients with multiple sclerosis: A pilot study, <i>J. of Immunol.</i> , doi: 10.1016/j.jneuroim.2010.07.013 (2010)	7/19/2010	AIRM00171057	AIRM00171061			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>IJ</b>	Data slides	10/9/2012	AIRM00192348	AIRM00192351			Relevance (FRE 401-402).
<b>IK</b>	E-mail from X. Wang to J. Lu re iPSC- MSC in EAE attaching invoice	8/7/2013	AIRM00230406	AIRM00230408			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>IL</b>	E-mail from E. Kimbrel to X. Wang re hi collaboration	11/23/2010	AIRM00233017	AIRM00233017			Hearsay.
<b>IM</b>	The buzz surrounding MSCs	6/27/2011	AIRM00247661	AIRM00247668			Hearsay; Incomplete Document (FRE 106).



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IN	Generation of MSCs from hESC-derived hemangioblasts	12/22/2010	AIRM00247676	AIRM00247677			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Authentication (FRE 901).
IO	Connick, P. et al., Autologous mesenchymal stem cells for the treatment of secondary progressive multiple sclerosis: an open-label phase 2a proof-of-concept study, <i>the Lancet</i> , 11:150-156 (2012)	2/1/2012	AIRM00248074	AIRM00248080			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IP	Qin Y, et al., Human Embryonic Stem Cell-Derived Mesenchymal Stromal Cells Decrease the Development of Severe Experimental Autoimmune Uveitis in B10. RIII Mice. Ocular immunology and inflammation. 2018 Nov 17;26(8):1228-36	11/7/2018	AIRM00262391	AIRM00262400			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IQ	Le Blanc, K. et al., HLA expression and immunologic properties of differentiated and undifferentiated mesenchymal stem cells, <i>Experimental Hematology</i> , 31:890-896 (2003)	2003	AIRM00298355	AIRM00298361			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IR	Augello et al., Bone marrow mesenchymal progenitor cells inhibit lymphocyte proliferation by activation of the programmed death 1 pathway, <i>Eur. J. Immunology</i> , 35:1482-1490 (2005)	2005	AIRM00298362	AIRM00298370			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IS	Caniglia et al., The effect of intralesional injection of bone marrow derived mesenchymal stem cells and bone marrow supernatant on collagen fibril size in a surgical model of equine superficial digital flexor tendonitis, <i>Equine Veterinary J.</i> , 44:587-593 (2011)	2011	AIRM00298371	AIRM00298377			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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IT	Ahsan, T., Doyle, A.M., & Nerem, R.M., Stem Cell Research, <i>in</i> Foundations of Regenerative Medicine, 28-47 (Atala, A., Lanza, R., Thomson, J.A., & Nerem, R.M., eds., 2010)	2010	AIRM00298378	AIRM00298405			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IU	Levine, A.J. & Brivanlou, A.H., The Molecular Basis of Pluripotency in Principles of Regenerative Medicine, <i>in</i> Foundations of Regenerative Medicine, 126-135 (Atala, A., Lanza, R., Thomson, J.A., & Nerem, R.M., eds., 2010)	2010	AIRM00298406	AIRM00298423			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IV	Yu, J. & Thompson, J.A., Embryonic Stem Cells: Derivation and Properties, <i>in</i> Foundations of Regenerative Medicine, 138-153 (Atala, A., Lanza, R., Thomson, J.A., & Nerem, R.M., eds., 2010)	2010	AIRM00298424	AIRM00298447			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IW	Chung, Y., et al., Embryonic and Extraembryonic Stem Cell Lines Derived From Single Mouse Blastomeres, <i>Nature</i> , 439(7073):216-219 (2005)	2005	AIRM00298448	AIRM00298451			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IX	Einstein et al., Neural Precursors Attenuate Autoimmune Encephalomyelitis by Peripheral Immunosuppression, <i>Annual Neurology</i> , 61:209-218 (2007)	2007	AIRM00298485	AIRM00298494			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IY	Schwartz, S. D. et al., Embryonic Stem Cell Trials for Macular Degeneration: A Preliminary Report, <i>Lancet</i> , 379:713-20 (2012)	2012	AIRM00298495	AIRM00298502			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
IZ	Evans, M.J. & Kaufman, M.H., Establishment in Culture of Pluripotential Cells from Mouse Embryos, <i>Nature</i> , 292:154-156 (1981)).	1981	AIRM00298503	AIRM00298505			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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JA	Friedenstein et al., The Development of Fibroblast Colonies in Marrow and Spleen Cells Monolayer Cultures of Guinea-Pig Bone, <i>Cell Tissue Kinetics</i> , 3:393-403 (1970)	1970	AIRM00298525	AIRM00298535			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JB	Kim, D. et al., Generation of Human Induced Pluripotent Stem Cells by Direct Delivery of Reprogramming Proteins, <i>Cell Stem Cell</i> , 4:472-76 (2009)	2009	AIRM00298547	AIRM00298555			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JC	Lu, S. J., et al., Hemangioblasts from Human Embryonic Stem Cells Generate Multilayered Blood Vessels with Functional Smooth Muscle Cells, <i>Regenerative Medicine</i> , 4:37-47 (2009)	2009	AIRM00298564	AIRM00298574			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JD	Schwartz, S. D. et al., Human Embryonic Stem Cell-Derived Retinal Pigment Epithelium in Patients with Age-Related Macular Degeneration and Stargardt's Macular Dystrophy: Follow-Up of Two Open-Label Phase 1/2 Studies, <i>Lancet</i> , 385:509-16 (2015)	2015	AIRM00298584	AIRM00298591			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JE	Lanza, R. et al., Human Therapeutic Cloning, <i>Nature Medicine</i> , 5:975-77 (1999)	1999	AIRM00298592	AIRM00298594			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JF	Sato, N., et. al., Molecular Signature of Human Embryonic Stem Cells and Its Comparison with the Mouse, <i>Developmental Biology</i> , 260:404-413 (2003)	2003	AIRM00298604	AIRM00298613			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JG	Ohnishi et al., Transplantation of mesenchymal stem cells attenuates myocardial injury and dysfunction in a rat model of acute myocarditis, <i>J. Molecular &amp; Cellular Cardiology</i> , 42:88-97 (2007)	2007	AIRM00298614	AIRM00298623			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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TRIAL EXHIBIT #	DESCRIPTION	DATE	BEGBATES	ENDBATES	Dep. Exhibit #	Plfs.' Ob.	Def's.' Obj
JH	Lu, S. J. et al., Robust Generation of Hemangioblastic Progenitors from Human Embryonic Stem Cells, <i>Regenerative Medicine</i> , 3:693-704 (2008)	2008	AIRM00298624	AIRM00298635			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JJ	Brivanlou, A.H. & Darnell, J.E. Jr., Signal Transduction and the Control of Gene Expression, <i>Science</i> , 295:813-818 (2002)	2002	AIRM00298636	AIRM00298641			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JJ	Spagnoli, F.M. & Brivanlou, A.H., A Full Menu for Stem-Cell Research, <i>Genome Biology</i> , 6(3):311 (2005)	2005	AIRM00298642	AIRM00298643			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JK	Lanza R., Stem cell breakthrough: don't forget ethics, <i>Science</i> , 318:1865 (2007)	2001	AIRM00298644	AIRM00298646			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JL	Tabibzadeh, S. & Hemmati-Brivanlou, A., <i>Lefty</i> at the Crossroads of "Stemness" and Differentiative Events, <i>Stem Cells</i> , 24:1998-2006 (2006)	2006	AIRM00298647	AIRM00298655			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JM	Lanza, R. et al., The ethical reasons for stem cell research, <i>Science</i> , 292:1299 (2001)	2001	AIRM00298656	AIRM00298657			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JN	Warmflash, A., Arduini, G.L., & Brivanlou, A.H., The Molecular Circuitry Underlying Pluripotency in Embryonic Stem Cells, <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 4(5):443-456 (2012)	2012	AIRM00298685	AIRM00298706			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JO	Zakrzewski et al., Stem cells: past, present, and future, <i>Stem Cell Research &amp; Therapy</i> , 10:68 (2019)	2019	AIRM00298707	AIRM00298728			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JP	Canadian patent No. 2,792,802	10/31/2017	AIRM00298729	AIRM00298818			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).

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JQ	Han-soo, L. "CHA Biotech to transfer SCRMI shares, technology to AIRM", Korean Biomedical Review, (June 25, 2019)	6/25/2019	AIRM00298819	AIRM00298820			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JR	Press Release: Advanced Cell Technology Obtains Exclusive License for Hemangioblast Technology in North America (July 21, 2011)	7/25/2011	AIRM00298821	AIRM00298826			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JS	Press Release: Astellas Announces Results of Tender Offer to Acquire All Outstanding Shares of Ocata Therapeutics and Changes to Subsidiaries, Astellas Pharma Inc (Feb. 10, 2016)	2/10/2016	AIRM00298827	AIRM00298931			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JT	Fortier, Stem Cells: Classifications, Controversies, and Clinical Applications, <i>Veterinary Surgery</i> , 34:415-423 (2005)	1/1/2005	AIRM00298834	AIRM00298842			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JU	U.S. Corporate Profile, Astellas Pharma US		AIRM00298843	AIRM00298844			For reasons stated in Defendants' Motion in Limine and inconsistent with Plaintiffs' Motion in Limine re corporate size.
JV	Jiang, L., "Advanced Cell Technology, Inc." The Embryo Project Encyclopedia	6/25/2010	AIRM00298845	AIRM00298846			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JW	Advanced Cell Technology Changes Name to Ocata Therapeutics, Business Wire	11/24/2014	AIRM00298847	AIRM00298847			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
JX	Yu, J. et al, Embryonic Stem Cells stemcells.nih.gov	2006	AIRM00298868	AIRM00298876			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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<b>JY</b>	Menaa, F. et al., Impact and Challenges of Mesenchymal Stem Cells in Medicine: An Overview of the Current Knowledge, Stem Cells Int'l, Vol. 2018, Article ID5023925 (2018)	2018	AIRM00298878	AIRM00298881			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>JZ</b>	Gross, M., Pushing stem cells to market, Current Biology, Vol. 15 No. 15	1/1/2005	AIRM00298964	AIRM00298965			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KA</b>	Definition: Regenerative Medicine, AABB Center for Cellular Therapies		AIRM00298972	AIRM00298973			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KB</b>	Romanov, Y. et al., Searching for Alternative Sources of Postnatal Human Mesenchymal Stem Cells: Candidate MSC-Like Cells from Umbilical Cord, Stem Cells 21:105-110 (2003)	2003	AIRM00298974	AIRM00298980			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; Inadmissible Compilation of Two Unrelated Documents.
<b>KC</b>	Coghlan, A., Stem cell timeline, The history of a medical sensation, New Scientist (Jan. 30, 2014)	2014	AIRM00298981	AIRM00298984			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KD</b>	Patentscope for International App WO 2013/082543 A1		AIRM00298987	AIRM00298987			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; Incomplete Document (FRE 106); Not the Best Evidence.
<b>KE</b>	Van De Walle, G.R., et al., Mesenchymal Stem Cell Therapy, <i>Equine Clinical Immunology</i> , 31:297-309 (2016)	2016	AIRM00298988	AIRM00299000			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KF</b>	Jung, D.I., et al., A comparison of autologous and allogenic bone marrow-derived mesenchymal stem cell transplantation in canine spinal cord injury, <i>Journal of Neurological Sciences</i> , 285,67-77 (2009)	2009	AIRM00299001	AIRM00299011			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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<b>KG</b>	Marfe, G., et al., Blood derived stem cells: an ameliorative therapy in veterinary ophthalmology, <i>J. of Cellular Physiology</i> , 227(3), 1250-1256 (2012)	2012	AIRM00299012	AIRM00299018			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KH</b>	Jamnig, A. & Lepperdinger, G., From tendon to nerve: an MSC for all seasons, <i>Canadian J. of Physiology and Pharmacology</i> , 90(3):295-306 (2012)	2012	AIRM00299019	AIRM00299031			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KI</b>	Gupta, P.K., et al., Mesenchymal stem cells for cartilage repair in osteoarthritis, <i>Stem Cell Research and Therapy</i> , 3:25 (2012)	2012	AIRM00299032	AIRM00299040			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KJ</b>	Gold, R., et al., Understanding pathogenesis and therapy of multiple sclerosis via animal models: 70 years of merits and culprits in experimental autoimmune encephalomyelitis research, <i>Brain</i> , 129:1953-1971 (2006)	2006	AIRM00299041	AIRM00299059			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KK</b>	M.L. Delco & L.A. Fortier, Integrin $\alpha 10\beta 1$ -selected Mesenchymal Stem Cells Mitigate the Progression of Osteoarthritis in an Equine Talar Impact Model, <i>Am. J. of Sports Medicine</i> (2019) (unpublished manuscript) (on file with authors)	1/1/2019	AIRM00299060	AIRM00299087			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KL</b>	Hartman, Z., Addressing A Major Public Need, The Ocata Preclinical Pipeline, Part 2 Platelet Production, Seeking Alpha, (Oct. 1, 2015)	10/1/2015	AIRM00299088	AIRM00299095			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KM</b>	Tirole, J., Traditional Cournot Analysis, The Theory of Industrial Organization, Chapter 5, p. 218-221 (1994)	1994	AIRM00299278	AIRM00299287			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KN</b>	Jing, D., et al., Hematopoietic stem cells in co-culture with mesenchymal stromal cells-modeling the niche compartments in vitro, <i>Haematologica</i> , 95(4):542-550 (2010)	2010	AIRM00299288	AIRM00299296			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.

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KO	Dominici, M., et al., Minimal criteria for defining multipotent mesenchymal stromal cells. The International Society for Cellular Therapy position statement, <i>Cytotherapy</i> , 8(4):315-317 (2006)	2006	AIRM00299297	AIRM00299299			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KP	Corning Matrigel Matrix Frequently Asked Questions		AIRM00299347	AIRM00299354			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KQ	Sigma Aldrich, Product Information Sheet, Stemline II Medium		AIRM00299355	AIRM00299357			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KR	Deglincerti, A. et al., Self-Organization of Spatial Patterning in Human Embryonic Stem Cells, <i>Current Topics in Developmental Biology</i> , 116:99-113 (2016)	1/1/2016	AIRM00299358	AIRM00299371			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KS	Kappos, L. et al., Ocrelizumab in relapsing-remitting multiple sclerosis: a phase 2, randomised, placebo-controlled, multicentre trial, <i>Lancet</i> , 378:1779-1787 (2011)	1/1/2011	AIRM00299446	AIRM00299459			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KT	Liotta, F. et al., Toll-Like Receptors 3 and 4 Are Expressed by Human Bone Marrow-Derived Mesenchymal Stem Cells and Can Inhibit Their T-Cell Modulatory Activity by Impairing Notch Signaling, <i>Stem Cells</i> , 26:279-89 (2007)	10/25/2007	AIRM00299481	AIRM00299491			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
KU	Najar, M. et al., Mesenchymal stromal cells promote or suppress the proliferation of T lymphocytes from cord blood and peripheral blood: the importance of low cell ratio and role of interleukin-6, <i>Cytotherapy</i> , 11(5):570-583 (2009)	1/1/2009	AIRM00299514	AIRM00299527			Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.



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<b>KV</b>	Advanced Cell Technology to Participate on Panels and Host Experts Luncheon at 2012 World Stem Cell Summit, FierceBiotech (2012)	12/4/2012	AIRM00299740	AIRM00299740			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KW</b>	Advanced Cell Technology Receives FDA Clearance For the First Clinical Trial Using Embryonic Stem Cells to Treat Macular Degener, FierceBiotech (2010)	11/22/2010	AIRM00299741	AIRM00299742			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KX</b>	Press Release: Astellas to acquire Ocata Therapeutics	11/9/2015	AIRM00299748	AIRM00299750			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KY</b>	Advanced Cell Technology to Present at Two Upcoming Conferences, FierceBiotech (2011)	9/8/2011	AIRM00299751	AIRM00299752			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>KZ</b>	NIH Approves Advanced Cell Technology's Stem Cell Line for Federal Funding, FierceBiotech (2010)	6/11/2010	AIRM00299753	AIRM00299754			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
<b>LA</b>	Zhuhai Hengqin ImStem Biotechnology, Co. Ltd company records from National Enterprise Credit Information Publicity System and translation		AIRM00299755	AIRM00299789			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay; For reasons stated in Defendants' Motion in Limine re China.
<b>LB</b>	E-mail from E. Kimbrel to X. Wang re mice arrived one week early	11/20/2012	IMSTEM-0004949	IMSTEM-0004950			Relevance (FRE 401-402).
<b>LC</b>	E-mail from E. Kimbrel to X. Wang re EAE model and experiments	3/1/2012	IMSTEM-0005311	IMSTEM-0005315			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>LD</b>	E-mail from N. Kouris to X. Wang and E. Kimbrel, copying R. Xu, re EAE Studies	6/14/2012	IMSTEM-0005744	IMSTEM-0005746			Relevance (FRE 401-402).
<b>LE</b>	E-mail from E. Kimbrel to X. Wang re Astellas giving Dr. Wang MSCs for teratoma assays	8/23/2012	IMSTEM-0006002	IMSTEM-0006004			Relevance (FRE 401-402).
<b>LF</b>	E-mail from E. Kimbrel to X. Wang re hello again	8/7/2012	IMSTEM-0006131	IMSTEM-0006132			Relevance (FRE 401-402).

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<b>LG</b>	E-mail from E. Kimbrel to X. Wang re immunizations today or tomorrow?	11/29/2012	IMSTEM-0006145	IMSTEM-0006145			Relevance (FRE 401-402).
<b>LH</b>	E-mail from E. Kimbrel to X. Wang re photos with 100 um scale bar	3/18/2013	IMSTEM-0006576	IMSTEM-0006576			Relevance (FRE 401-402).
<b>LI</b>	E-mail from E. Kimbrel to X. Wang re revision plan	6/28/2013	IMSTEM-0007035	IMSTEM-0007037			Relevance (FRE 401-402).
<b>LJ</b>	E-mail from E. Kimbrel to X. Wang re urgent	6/28/2013	IMSTEM-0007052	IMSTEM-0007053			Relevance (FRE 401-402).
<b>LK</b>	E-mail from X. Wang to E. Kimbrel re two moive first	3/29/2012	IMSTEM-0008786	IMSTEM-0008788			Relevance (FRE 401-402).
<b>LL</b>	E-mail from X. Wang to E. Kimbrel re FedEx track 798130529810	3/6/2012	IMSTEM-0008839	IMSTEM-0008841			Relevance (FRE 401-402).
<b>LM</b>	E-mail from X. Wang to E. Kimbrel re EAE Model and Experiments	2/27/2012	IMSTEM-0008848	IMSTEM-000852			Relevance (FRE 401-402).
<b>LN</b>	E-mail from X. Wang to E. Kimbrel re update	4/9/2012	IMSTEM-0008913	IMSTEM-0008915			Relevance (FRE 401-402).
<b>LO</b>	E-mail from X. Wang to R. Xu re MSC protocol	4/9/2012	IMSTEM-0008916	IMSTEM-0008916			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>LP</b>	E-mail from X. Wang to E. Kimbrel re EAE studies	5/3/2012	IMSTEM-0009001	IMSTEM-0009002			Relevance (FRE 401-402).
<b>LQ</b>	E-mail from X. Wang to E. Kimbrel re MSCs for gene expression analysis?	4/19/2012	IMSTEM-0009017	IMSTEM-0009018			Relevance (FRE 401-402).
<b>LR</b>	E-mail from X. Wang to E. Kimbrel re leaving now	11/13/2012	IMSTEM-0009686	IMSTEM-0009686			Relevance (FRE 401-402).
<b>LS</b>	E-mail from X. Wang to E. Kimbrel re Reagent List	11/5/2012	IMSTEM-0009699	IMSTEM-0009699			Relevance (FRE 401-402).
<b>LT</b>	E-mail from X. Wang to E. Kimbrel re Which EAE induction kit to order	11/25/2012	IMSTEM-0009756	IMSTEM-0009756			Relevance (FRE 401-402).
<b>LU</b>	E-mail from X. Wang to E. Kimbrel re cells to you	3/19/2013	IMSTEM-0009943	IMSTEM-0009943			Relevance (FRE 401-402).
<b>LV</b>	E-mail from X. Wang to E. Kimbrel re what day for injections of MSCs?	1/30/2013	IMSTEM-0010130	IMSTEM-0010131			Relevance (FRE 401-402).
<b>LW</b>	Formatted and excerpted version of ImStem-0011870 (excerpt as used in Dr. Fortier Rebuttal Report)	6/22/2012	IMSTEM-0011870	IMSTEM-11870			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Incomplete Document (FRE 106); Not Evidence.

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<b>LX</b>	E-mail from R. Xu to E. Kimbrel and X. Wang re Sunday	10/11/2013	IMSTEM-0016184	IMSTEM-0016184			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Incomplete Document (FRE 106).
<b>LY</b>	E-mail from E. Kimbrel to X. Wang re EAE ips	8/23/2013	IMSTEM-0017245	IMSTEM-0017246			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Incomplete Document (FRE 106).
<b>LZ</b>	E-mail from E. Kimbrel to X. Wang re Greg to Deliver Cells	8/21/2013	IMSTEM-0018003	IMSTEM-0018005			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MA</b>	E-mail from S. Lu to X. Wang and E. Kimbrel re iPSC-MSC in EAE	8/8/2013	IMSTEM-0018023	IMSTEM-0018023			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MB</b>	E-mail from X. Wang to E. Kimbrel re next expt?	7/24/2013	IMSTEM-0019454	IMSTEM-0019456			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MC</b>	E-mail from E. Kimbrel to X. Wang re update	2/15/2011	IMSTEM-0021740	IMSTEM-0021741			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MD</b>	E-mail from G. Yavanian to E. Kimbrel and X. Wang re Cell delivery to UConn tomorrow	8/2/2013	IMSTEM-0021742	IMSTEM-0021743			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>ME</b>	E-mail from X. Wang to A. Lazorchak FW Preliminary Application for CBIF fund by ImStem Biotechnology 2014 Feb attaching Attachment I: Cover Page CBIF 2014 Q1	3/17/2014	IMSTEM-0024194	IMSTEM-0024262			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MF</b>	E-mail from X. Wang to E. Smith re FW: 2012-CT-SEED-Grant-Xiaofang Wang attaching grant application	1/13/2012	IMSTEM-0040175	IMSTEM-0040207			Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403).
<b>MG</b>	Defendant Ren-He Xu's Responses to Astellas' second set of Interrogatories (22-30)	7/16/2019					Hearsay.
<b>MH</b>	Defendants' Objections and Responses to Astellas' Fourth Set of Interrogatories (36)	10/11/2019					Hearsay.
<b>MI</b>	Defendants' Objections and Responses to Astellas' Third Set of Interrogatories (31-35)	10/15/2019					Hearsay.

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<b>MJ</b>	Defendants Xiaofang Wang and ImStem's Responses to Astellas's second set of Interrogatories (22-30)	7/16/2019					Hearsay.
<b>MK</b>	Excerpt of U.S. Patent Application No. 15/656,473	7/21/2017					Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Incomplete Document (FRE 106); For reasons stated in Defendants' Motion in Limine re other patent.
<b>ML</b>	ACT Financial Statements (native Excel)	12/31/2006	SCRM1015916	SCRM1015916		R, P, H, LF, LK	
<b>MM</b>	FRE 1006 Summary of ImStem's tax returns						Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403)
<b>MN</b>	FRE 1006 Summary of Investments in ImStem						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.
<b>MO</b>	FRE 1006 Summary of R&D documents and email exchanges supporting time lines						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.
<b>MP</b>	FRE 1006 Summary of research papers						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.
<b>MQ</b>	FRE 1006 Summary of research papers						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.
<b>MR</b>	FRE 1006 Summary of research papers						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.
<b>MS</b>	FRE 1006 Summary of research papers						Hearsay; Demonstrative--not a proper FRE 1006 exhibit; Not Voluminous (FRE 1006); Not Evidence.

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TRIAL EXHIBIT #	DESCRIPTION	DATE	BEGBATES	ENDBATES	Dep. Exhibit #	Plfs.' Ob.	Defs.' Obj
MT	Tysabri 2004 Label	11/1/2004					Relevance (FRE 401-402); Prejudice, Confusion, Waste of Time, Cumulative (FRE 403); Hearsay.
MU	Excerpt of Wang lab notebook--various pages Oct 2010 to Jan 2011	10/14/2010	IMSTEM-0020231	IMSTEM-0020237		R, P, H, I, IO, LF, LK	
MV	Email from Vincent to Xu et al. re Inquiry from UConn	6/8/2012	AIRM00018183	AIRM00018186		R, P, H, LF, LK	
MW	Email from Lanza to Vincent, Heffernan re What rights do we have...	6/5/2014	AIRM00146960	AIRM00146962		R, H, P, LK, LF, DU	
MX	Article: Galat, et al. <i>Cytokine-free directed differentiation of human pluripotent stem cells efficiently produces hyemogenic endothelium with lymphoid potential</i> , Stem Cell Research & Therapy	3/17/2017	AIRM00002025	AIRM00002035		R, H, IO, P	
MY	Regenerative Medicine Labs Quarterly Report 1Q2Q FY 2016	9/7/2016	AIRM00005281	AIRM00005285		R, P, LK, LF, A	
MZ	Draft Material Transfer Agreement	5/26/2017	AIRM00011314	AIRM00011322		R, P, LF, A, H, DE	
NA	Material Transfer Agreement--unexecuted	7/1/2017	AIRM00012283	AIRM00012291		R, P, LF, A, H, DE	
NB	Email from Wang to Kimbrel re hi	7/29/2010	AIRM00013861	AIRM00013862		R, P, H, IO, LF, LK	
NC	Lu, et al. "Therapeutic Applications of Human Embryonic Stem Cells," Chapter for <i>Human Stem Cell Technology and Biology: A Research Guide and Laboratory Manual</i> (Wiley & Sons, Inc.). Edited by Browski et al.		AIRM00013883	AIRM00013902		R, IO, P, H	
ND	Email from Lu to Kimbrel re preliminary data, attachment	12/13/2010	AIRM00014594	AIRM00014596		R, P, H, DE, IO, LF, LK	
NE	Email from Xu to Lu, Kimbrel re CT proposal, attachment	12/29/2010	AIRM00014656	AIRM00014672		R, P, H, IO, LF, LK	
NF	Email from Marusic to Kimbrel re contract research?	4/10/2012	AIRM00016953	AIRM00016956		R, P, H, LF, LK	
NG	Email from Kouris to Kimbrel re Hooke Lab - EAE	5/23/2012	AIRM00017645	AIRM00017645		R, P, H, LF, LK	

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NH	Email from Lu to Kimbrel re Wound healing budget.pdf; attachment redacted	6/4/2012	AIRM00017978	AIRM00017983		R, P, H, LF, LK	
NI	Email from McCabe to Kimbrel re GOIs	8/7/2012	AIRM00021061	AIRM00021062		R, P, H, LF, LK	
NJ	Email from McCabe to Kimbrel re a few other candidates	9/13/2012	AIRM00022388	AIRM00022389		R, P, H, LF, LK	
NK	Article: Avni, et al. <i>Th Cell differentiation is accompanied by dynamic changes in histone acetylation of cytokine genes</i>	6/10/2002	AIRM00027458	AIRM00027466		R, H, IO, P	
NL	Hoffman email to Kimbrel re EAE stats	5/22/2013	AIRM00029217	AIRM00029224		R, P, H, LF, LK	
NM	Email from Vincent to Kimbrel et al. re keep eye on UConn patent pending	6/28/2013	AIRM00031180	AIRM00031180		R, P, LK, LF, I, H	
NN	Email from Vincent to Kimbrel; withheld as privileged--attaching PCT doc	1/31/2014	AIRM00036567	AIRM00036670		R, H, P	
NO	Metadata concerning email from Fleischel to Kimbrel, withheld as privileged (Ex 24)	2/21/2014	AIRM00037250	AIRM00037250		AC, A, BE, H, LA, LF, LK, MIL, NP, P, R	
NP	Email from Joste to Vincent, Kimbrel re Ocata - MSC Program - Jan 2015 - ver5.pptx, attachment	2/2/2015	AIRM00043189	AIRM00043235		R, P, LK, LF, H	
NQ	Email from Vincent to Kimbrel, Lanza re IMSTEM patent application, with link	7/29/2015	AIRM00044863	AIRM00044865		R, P, LK, LF, I, H	
NR	Email from Vincent to Kimbrel, Lanza re The original provisional application they filed; attachment	7/29/2015	AIRM00044866	AIRM00044897		R, P, LK, LF, H	
NS	Email from Kimbrel to Lu re use of irradiated MSCs	8/11/2011	AIRM00049403	AIRM00049403		R, P, H, LF, LK	
NT	Email from Kimbrel to Lanza re MSCs and glaucoma paper	9/13/2011	AIRM00049689	AIRM00049689		R, P, H, LF, LK	
NU	Email from Kimbrel to McCabe re GOIs [genes of interest] (attachments)	8/7/2012	AIRM00051594	AIRM00051613		R, P, H, LF, LK	
NV	Email from Kimbrel to McCabe re a few other candidates; attachment	9/13/2012	AIRM00052016	AIRM00052023		R, P, H, LF, LK	

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<b>NW</b>	Email from Kimbrel to Vincent and Fleishell re keep eye on UConn patent pending	6/28/2013	AIRM00056802	AIRM00056802		R, P, LK, LF, H	
<b>NX</b>	Email from Kimbrel to Chu and Lu re Good call	7/10/2012	AIRM00070617	AIRM00070617		R, P, H, LF, LK	
<b>NY</b>	Non-Exclusive License and Supply Agreement	3/16/2015	AIRM00075954	AIRM00075972		R, P, LK, LF, H, DE	
<b>NZ</b>	Email from Kimbrel to Vincent et al. re version 12!; attachment	2/19/2015	AIRM00080065	AIRM00080111		R, P, LK, LF, H	
<b>OA</b>	Email from Staton to Jooste et al. re Ocata - MSC NewCo Presentation; attachment	2/6/2015	AIRM00080285	AIRM00080332		R, P, H, LK, LF	
<b>OB</b>	Email from Jooste to Wotton re interview?	11/5/2014	AIRM00080386	AIRM00080387		R, P, H, LK, LF	
<b>OC</b>	Material Transfer Agreement	1/30/2015	AIRM00081066	AIRM00081073		R, P, LK, LF, DE, H	
<b>OD</b>	Sponsored Research Agreement; BWH Agreement No. 2016D003560	8/15/2016	AIRM00087311	AIRM00087333		R, P, LF, H	
<b>OE</b>	Term Sheet - SCRMI, CHA Bio and ACT	5/23/2011	AIRM00088288	AIRM00088292		R, P, H, LF, LK	
<b>OF</b>	Email from Lu to Lanza re UConn collaborators' new company	5/21/2013	AIRM00093163	AIRM00093163		R, P, H, LF, LK	
<b>OG</b>	Email from Vincent to Heffernan re What rights do we have...	6/5/2014	AIRM00097111	AIRM00097113		R, H, P, LF, LK	
<b>OH</b>	Email from Heffernan to Vincent re What rights do we have...	6/5/2014	AIRM00097114	AIRM00097116		R, H, P, LK, LF	
<b>OI</b>	Email from Wotton to Myles et al re ACT_Strategic Planning Kick-off_September 11 2014_MEETING OUTPUTS.pptx; attachment	9/15/2014	AIRM00097512	AIRM00097544		R, P, H, LK, LF, DE	
<b>OJ</b>	Email from Lanza to Wotton et al re SPARK's gene therapy has limitations - only works for a couple of years...../my two cents	5/4/2015	AIRM00129472	AIRM00129475		R, P, LK, LF, H	
<b>OK</b>	Email from Vincent to Lanza et al re Another potential piece of the mechanism (and potential value)	2/18/2015	AIRM00138446	AIRM00138446		R, P, LK, LF, H	
<b>OL</b>	Email from Kwon to Jooste, Epstein re Next steps; attaching MTS Strategic Advisory Engagement Letter	11/25/2014	AIRM00138823	AIRM00138830		R, P, H, LK, LF	

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<b>OM</b>	Email from Vincent to Heffernan re What rights do we have...	6/5/2014	AIRM00139272	AIRM00139276		R, H, P, LK, LF	
<b>ON</b>	Sponsored Research Agreement	10/1/2013	AIRM00141867	AIRM00141878		R, P, LF, A, H	
<b>OO</b>	321 Non-provisional application	11/30/2012	AIRM00142583	AIRM00142738		A, DE, H, LF, LK	
<b>OP</b>	Email from Lanza to Karunaratne re Astellas visit; attachment	5/13/2015	AIRM00145473	AIRM00145500		R, P, LK, LF, H	
<b>OQ</b>	Material Transfer Agreement	3/28/2006	AIRM00151415	AIRM00151420		R, P, H, LK, LF, DE	
<b>OR</b>	Email from Lu to Lanza re Completely inappropriate	11/9/2011	AIRM00151661	AIRM00151663		R, P, H, LF, LK	
<b>OS</b>	MSC Program 2012 Summary and 2013 Goals		AIRM00152299	AIRM00152301		R, P, H	
<b>OT</b>	U.S. Patent No. 7,615,374	11/10/2009	AIRM00170011	AIRM00170016		R, H, P, LF	
<b>OU</b>	Kimbrel's PowerPoint slides for lab meeting "hESC-MSCs versus BM-MSCs"	4/6/2012	AIRM00180396	AIRM00180416		H, LF, LK	
<b>OV</b>	PowerPoint slides - ACT Corporate Objectives Overview 2014	10/23/2013	AIRM00181158	AIRM00181160		R, P, LK, LF, H	
<b>OW</b>	Draft proposal language; filename: CT proposal_rx_122910.EKedits.docx	12/29/2010	AIRM00181498	AIRM00181513		R, P, H, IO, LF, LK	
<b>OX</b>	SCRMI Executive Scientific Progress Report submitted by John Lu	9/1/2010	AIRM00182090	AIRM00182126		R, P, H, LF, LK	
<b>OY</b>	PowerPoint slides - Ocata Therapeutics Private Placement Offering	2/5/2015	AIRM00198347	AIRM00198393		R, P, LK, LF, H	
<b>OZ</b>	PowerPoint slides - Ocata Therapeutics Mesenchymal Stem Cell Program	1/9/2015	AIRM00198397	AIRM00198425		R, P, LK, LF, H	
<b>PA</b>	Form 10-K Advanced Cell Technologies for fiscal year end 12/31/2008	12/31/2008	AIRM00205794	AIRM00205933		R, P, LF, H	
<b>PB</b>	Form 10-K Advanced Cell Technologies for fiscal year end 12/31/2010	12/31/2010	AIRM00206257	AIRM00206393		R, P, LF	
<b>PC</b>	Form 10-K Advanced Cell Technologies for fiscal year end 12/31/2011	12/31/2011	AIRM00206394	AIRM00206511		R, P, LF	
<b>PD</b>	Form 10-K Advanced Cell Technologies for fiscal year end 12/31/2013	12/31/2013	AIRM00206802	AIRM00207084		R, P, LF	



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PE	Article: Slukvin. Deciphering the hierarchy of angiohematopoietic progenitors from human pluripotent stem cells.	3/1/2013	AIRM00218595	AIRM00218602		R, P, H, IO	
PF	Research Services Agreement	5/20/2013	AIRM00220925	AIRM00220939		R, P, H, LF, LK	
PG	Email from Mary Fleishell to John Lu; withheld as privileged--attaching WO 2014/011407	2/21/2014	AIRM00226256	AIRM00226393		R, P, LK, LF, MIL, H	
PH	Email from Wang to Kimbrel re MSC in EAE study	11/5/2012	AIRM00229849	AIRM00229853		R, P, H, IO, LF, LK	
PI	Email from Cole to Lu re 2015 Regenerative Medicine and Stem cell based Cell therapies-Drugs of the Future Offering Hope for Cure	2/6/2015	AIRM00239520	AIRM00239522		R, H, P, LK, LF	
PJ	Kimbrel lab notebook	9/21/2010	AIRM00249013	AIRM00249126		LF, LK	
PK	Kouris Lab notebook No. ACT A184	11/8/2012	AIRM00250490	AIRM00250690		R, P, H, LF, LK	
PL	Kouris Lab notebook No. ACT A196	8/23/2013	AIRM00250691	AIRM00250896		R, P, H, LK, LF	
PM	Kimbrel Lab notebook excerpt	8/6/2015	AIRM00262972	AIRM00262977		R, P, LK, LF, H	
PN	Kimbrel Lab notebook No. 191	4/1/2013	AIRM00262978	AIRM00263023		H, LF, LK	
PO	Lu lab notebook No. A149	12/29/2008	AIRM00263376	AIRM00263434		R, P, LK, LF, H	
PP	Lu lab notebook No. 159	7/18/2011	AIRM00263435	AIRM00263483		R, P, H, LF, LK	
PQ	Email from Vincent to Kimbrel re Ocata - MSC Program - Jan 2015 - ver4.pptx; attachment	1/29/2015	AIRM00265030	AIRM00265082		R, P, LK, LF	
PR	MSC program/NewCo budget by year...	12/18/2014	AIRM00265840	AIRM00265842		R, P, LK, LF, H	
PS	Email from Heffernan to Vincent re What rights do we have...	6/5/2014	AIRM00269176	AIRM00269179		R, H, P, LF, LK, H	
PT	Email from Vincent to Lu re UConn collaborators' new company	5/28/2013	AIRM00270779	AIRM00270780		R, P, H, DU, LF, LK	
PU	Email from Jooste to Kimbrel et al re HMC Private Placement Presentation; attached Ocata - MSC Program - 23 Feb 2015 - final version 15.pdf	2/23/2015	AIRM00275265	AIRM00275311		R, P, LK, LF, H	
PV	Email from Kimbrel to Singh re Matt's deck ; attached Ocata - MSC Program - Jan 2015 - ver4.pptx	1/30/2015	AIRM00276228	AIRM00276281		R, P, LK, LF, H	
PW	Lu lab notebook No. 097	4/14/2005	AIRM00282824	AIRM00283020		R, H, LF, LK	

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TRIAL EXHIBIT #	DESCRIPTION	DATE	BEGBATES	ENDBATES	Dep. Exhibit #	Plfs.' Ob.	Defs.' Obj
PX	Exclusive License Agreement	11/30/2008	AIRM00296500	AIRM00296553		R, P, LF, DE, H	
PY	Allied Cell Technologies, Inc., Common Stock Purchase Agreement	11/30/2008	AIRM00296554	AIRM00296564		R, P, LF, H	
PZ	Shareholder Agreement	11/30/2008	AIRM00296572	AIRM00296587		R, P, LF, H, DE	
QA	Sublicense Agreement	11/30/2008	AIRM00296588	AIRM00296615		R, P, LF, H, DE	
QB	English translation of business plan (see IMSTEM-0045934-956) "Expansion Plan of Weixin Biological Stem Cell Co., Ltd."	2009	AIRM00297298	AIRM00297320		H, I, LA, LF, LK	
QC	English translation of business plan (see IMSTEM-0045917-933) "Weixin Biological Stem Cell Co., Inc."	2009	AIRM00297321	AIRM00297337		H, I, LA, LF, LK	
QD	ACT 2014 W2 data	1/1/2015	AIRM00297581	AIRM00297630		R, P, LK, LF, H	
QE	Press release (English/Korean) re CHA Biotech completes 50 billion-KRW deal with Astellas...	4/25/2019	AIRM00297781	AIRM00297782		R, H, P, LK, LF, A	
QF	PowerPoint slides, Project Laurel - Proposal for Binding Offer	10/16/2015	AIRM00298228	AIRM00298299		R, P, LK, LF, H, FL	
QG	Email from Wang to Kimbrel re hi collaboration	11/22/2010	IMSTEM-0000001	IMSTEM-0000001		H, IO, LF, LK	
QH	Email from Wang to Kimbrel re urgent...need graph as is... (PDF of native attachment, 2 pp)	12/9/2010	IMSTEM-0000002	IMSTEM-0000003		R, P, H, IO, LF, LK	
QI	Article: Maynard-Smith, et al. <i>A Directed Approach for Engineering Conditional Protein Stability Using Biologically Silent Small Molecules</i>	8/24/2007	IMSTEM-0000932	IMSTEM-0000938		R, H, IO, P	
QJ	Article: Banasynski, et al. <i>Chemical control of protein stability and function in living mice</i>	Oct-08	IMSTEM-0000939	IMSTEM-0000943		R, H, IO, P	
QK	Article: Mohtashami, et al. <i>Direct Comparison of DII1 and DII4 Mediated Notch Activation Levels Show Differential Lymphomyeloid Lineage Commitment Outcomes</i>	Jun-10	IMSTEM-0000971	IMSTEM-0000981		R, P, H, IO	
QL	Article: Stem Cell Assays Blog: <i>How to assess the probability of carcinogens in cell therapy</i>	7/19/2010	IMSTEM-0001060	IMSTEM-0001062		R, P, H, IO, A, DE, LF, LK,	

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QM	Article: In Sequence. <i>NimbleGen Array Capture Outperforms Two Target-Enrichment Methods in ABRF Research Group Comparison</i>	4/6/2010	IMSTEM-0001278	IMSTEM-0001279		R, P, H, IO	
QN	Article: Goto, et al. <i>Chronic Neutrophilic Leukemia with Congenital Robertsonian Translocation Successfully Treated with Allogeneic Bone Marrow Transplantation in a Young Man</i>	2009	IMSTEM-0001309	IMSTEM-0001313		R, H, IO, P	
QO	Email from Xu to Wang re RO1; attachment	12/28/2010	IMSTEM-0002095	IMSTEM-0002104		R, P, H, IO, LF, LK	
QP	Email from Xu to Kimbrel re data and info for grants	12/23/2010	IMSTEM-0002154	IMSTEM-0002156		R, P, H, IO, LF, LK	
QQ	Email from Xu to Wang re Proposal; attachment	12/21/2010	IMSTEM-0002175	IMSTEM-0002183		R, P, H, IO, LF, LK	
QR	Email from Xu to Kimbrel data and info for grants	12/18/2010	IMSTEM-0002194	IMSTEM-0002195		R, P, H, IO, LF, LK	
QS	Article: Lindsey, et al. <i>Cyclic stretch decreases TRPC4 protein and capacitative calcium entry in rat vascular smooth muscle cells</i>	4/22/2008	IMSTEM-0002445	IMSTEM-0002450		R, H, IO, P	
QT	Article: Vo, et al. <i>Smooth-Muscle-Like Cells Derived from Human Embryonic Stem Cells Support and Augment Cord-Like Structures in Vitro</i>	4/28/2010	IMSTEM-0002672	IMSTEM-0002682		R, P, H, IO	
QU	Email from Xu to Wang re order antibody	1/19/2011	IMSTEM-0003148	IMSTEM-0003148		R, P, H, IO, LF, LK	
QV	Article: Gong, et al. <i>Direct and Progressive Differentiation of Human Embryonic Stem Cells Into the Chondrogenic Lineage</i>	2010	IMSTEM-0003153	IMSTEM-0003160		R, P, H, IO	
QW	Email from Xu to Wang forwarding draft 2011 grant and attachments	1/4/2011	IMSTEM-0003252	IMSTEM-0003254		R, P, H, IO, LF, LK	
QX	Article: Ashokan, et al. <i>A molecular receptor targeted, hydroxyapatite nanocrystal based multi-modal contrast agent</i>	2009	IMSTEM-0003408	IMSTEM-0003418		R, H, IO, P	

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QY	Article: Yu, et al. <i>Efficient Feeder-Free Episomal Reprogramming with Small Molecules</i>	Mar-11	IMSTEM-0003881	IMSTEM-0003890		R, P, H, IO	
QZ	Article: Aharonowiz, et al. <i>Neuroprotective Effect of Transplanted Human Embryonic Stem Cell-Derived Neural Precursors in an Animal Model of Multiple Sclerosis</i>	Sep-08	IMSTEM-0003969	IMSTEM-0003978		R, H, IO, P	
RA	Article: Chen, et al. <i>Fibulin-4 regulates expression of the tropoelastin gene and consequent elastic-fibre formation by human fibroblasts</i>	2009	IMSTEM-0004402	IMSTEM-0004413		R, H, IO, P	
RB	Article: Aoyama, et al. <i>Quantitative Differences in Biosynthesis and Extracellular Deposition of Fibrillin in Cultured Fibroblasts Distinguish Five Groups of Marfan Syndrome Patients and Suggest Distinct Pathogenetic Mechanisms</i>	Jul-94	IMSTEM-0004655	IMSTEM-0004662		R, H, IO, P	
RC	Email from Xu to Kimbrel, Lu re in vivo MSC collaboration	11/30/2011	IMSTEM-0004668	IMSTEM-0004671		R, P, H, LF, LK	
RD	Article: Zambidis, et al. <i>Expression of antiotensin-converting enzyme identifies and regulates primitive hemangioblasts derived from human pluripotent stem cells</i>	Aug-06	IMSTEM-0004896	IMSTEM-0004910		R, H, IO, P	
RE	Article: Jung, et al. <i>Concise review: Induced Pluripotent Stem Cell-Derived Mesenchymal Stem Cells: Progress Toward Safe Clinical Products</i>	8/16/2011	IMSTEM-0004912	IMSTEM-0004917		R, P, H, IO	
RF	Email from Vincent to Gallo, Lu re Uconn Health Center MTA	1/27/2012	IMSTEM-0004968	IMSTEM-0004969		R, P, H, LF, LK	
RG	Email from Xu to Gallo re looking forward to 2012 experiments	1/26/2012	IMSTEM-0004978	IMSTEM-0004981		R, P, H, LF, LK	
RH	Email from Gallo to Xu re looking forward to 2012 experiments; attachment	1/26/2012	IMSTEM-0004982	IMSTEM-0004991		R, P, H, LF, LK	

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RI	Article: Martins-Taylor, et al. <i>Genomic Stability of Human Induced Pluripotent Stem Cells</i>	8/5/2011	IMSTEM-0005209	IMSTEM-0005214		R, P, H, IO	
RJ	Email from Xu to Wang re how'd it go?	3/26/2012	IMSTEM-0005268	IMSTEM-0005270		R, P, H, IO, LF, LK	
RK	Article: Ranganath, et al. <i>Harnessing the Mesenchymal Stem Cell Secretome for the Treatment of Cardiovascular Disease</i>	3/2/2012	IMSTEM-0005272	IMSTEM-0005286		R, P, H, IO	
RL	Article: Hockemeyer, et al. <i>Efficient targeting of expressed and silent genes in human ESCs and iPSCs using zinc-finger nucleases</i>	Sep-09	IMSTEM-0005374	IMSTEM-0005382		R, H, IO, P	
RM	Article: Pomper, et al. <i>Serial imaging of human embryonic stem-cell engraftment and teratoma formation in live mouse models</i>	Mar-09	IMSTEM-0005522	IMSTEM-0005531		R, H, IO, P	
RN	Article: Parekkadan, et al. <i>Mesenchymal Stem Cell-Derived Molecules Reverse Fulminant Hepatic Failure</i>	Sep-07	IMSTEM-0005788	IMSTEM-0005793		R, H, IO, P	
RO	Email from Xu to Wang re MSC selected genes, attached native spreadsheet	9/2/2012	IMSTEM-0005922	IMSTEM-0005923		R, P, H, I, IO, LF, LK	
RP	Email from Kimbrel to Xu et al re ISCCR abstract	1/31/2013	IMSTEM-0006185	IMSTEM-0006186		R, P, H, LF, LK	
RQ	Email from Xu to Kimbrel et al re ISCCR abstract; attachment	1/31/2013	IMSTEM-0006187	IMSTEM-0006188		R, P, H, IO, LF, LK	
RR	Email from Kimbrel to Wang and Xu re EAE manuscript	3/15/2013	IMSTEM-0006586	IMSTEM-0006589		R, P, H, LF, LK	
RS	Article: Wang, et al. <i>Human iPSC-Derived Oligodendrocyte Progenitor Cells can Myelinate and Rescue a Mouse Model of Congenital Hypomyelination</i>	2/7/2013	IMSTEM-0006899	IMSTEM-0006911		R, P, H, IO	
RT	Article: Kimura, et al. <i>In vivo dynamics of human cord blood-derived CD34 SCID-repopulating cells using intra-bone marrow injection</i>	2009	IMSTEM-0007877	IMSTEM-0007883		R, H, IO, P	

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## Lettered Exhibits With Objections

TRIAL EXHIBIT #	DESCRIPTION	DATE	BEGBATES	ENDBATES	Dep. Exhibit #	Plfs.' Ob.	Defs.' Obj
RU	Email from Wang to Xu re EAE model and experiments	2/22/2012	IMSTEM-0008868	IMSTEM-0008868		R, P, H, LF, LK	
RV	Email from Wang to Xu re abstract	8/21/2012	IMSTEM-0009031	IMSTEM-0009031		R, P, H, IO, LF, LK	
RW	Wang PowerPoint slides "Using hES-MSCs to treat Multiple Sclerosis (sic) animal model (EAE)" (PDF of native original, 37pp)	8/17/2012	IMSTEM-0009033	IMSTEM-0009033		R, P, H, IO, LF, LK	
RX	Email from Wang to Xu re IL-6 review nice and complete	8/22/2012	IMSTEM-0009562	IMSTEM-0009589		H, LA, LF, LK, IO,	
RY	Email from Wang to Kimbrel re IL12a expression	4/1/2013	IMSTEM-0009891	IMSTEM-0009895		R, P, H, IO, LF, LK	
RZ	Patent Application WO 2013/082543 A1	6/6/2013	IMSTEM-0011122	IMSTEM-0011271		H, LF, LK	
SA	Article: Ding, et al. <i>FGF-2 Modulates Wnt Signaling in Undifferentiated hESC and iPS Cells Through Activated PI3-K/GSK3 Signaling</i>	2010	IMSTEM-0011281	IMSTEM-0011292		R, P, H, IO	
SB	Article: Meijer, et al. <i>GSK-3 Selective Inhibitors Derived from Tyrian Purple Indirubins</i>	12/15/2013	IMSTEM-0011301	IMSTEM-0011312		R, H, IO, P	
SC	Article: Grimes, et al. <i>The multifaceted roles of glycogen synthase inase 3 in cellular signaling</i>	6/4/2001	IMSTEM-0011313	IMSTEM-0011348		R, H, IO, P	
SD	Article: Sineva, et al. <i>Inhibition of GSK3 enhances both adhesive and signaling activities of B-catenin in mouse embryonic stem cells</i>	2010	IMSTEM-0011349	IMSTEM-0011364		R, P, H, IO	
SE	Article: James, et al. <i>Expansion and maintenance of human embryonic stem cell-derived endothelial cells by TGFB inhibition is Id1 development</i>	Feb-10	IMSTEM-0011365	IMSTEM-0011371		R, P, H, IO	
SF	Article: Meijer, et al. <i>Pharmacological inhibitors of glycogen synthase kinase 3</i>	7/29/2004	IMSTEM-0011372	IMSTEM-0011381		R, H, IO, P	

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SG	Article: Graham, et al. <i>GSK-3 Represses Growth Factor-inducible Genes by Inhibiting NF-B in Quiescent Cells</i>	2/12/2010	IMSTEM-0011382	IMSTEM-0011390		R, P, H, IO	
SH	Article: Tsutsui, et al. <i>An optimized small molecule inhibitor cocktail supports long-term maintenance of human embryonic stem cells</i>	6/14/2010	IMSTEM-0011396	IMSTEM-0011403		R, P, H, IO	
SI	Email from Kimbrel to Wang re hi collaboration	8/4/2010	IMSTEM-0011865	IMSTEM-0011868		H, IO, LF, LK	
SJ	Article: Chang, et al. <i>The Kinases MEKK2 and MEKK3 Regulate Transforming Growth Factor-Mediated Helper T Cell Differentiation</i>	2/25/2011	IMSTEM-0011878	IMSTEM-0011900		R, P, H, IO	
SK	Article: Marusic, et al. <i>Cytosolic phospholipase A-deficient mice are resistant to experimental autoimmune encephalomyelitis</i>	9/19/2005	IMSTEM-0011948	IMSTEM-0011958		R, H, IO, P	
SL	Article: Karussis, et al. <i>Immunomodulation and neuroprotection with mesenchymal bone marrow stem cells a proposed treatment for multiple sclerosis and other neuroimmunological/neurodegenerative diseases</i>	7/3/2007	IMSTEM-0011959	IMSTEM-0011963		R, H, IO, P	
SM	Article: Yen, et al. <i>Human Embryonic Stem Cell-Derived Mesenchymal Progenitors Possess Strong Immunosuppressive Effects Toward Natural Killer Cells as Well as T Lymphocytes</i>	11/6/2008	IMSTEM-0011964	IMSTEM-0011969		R, H, IO, P	
SN	Article: Arpommaeklong, et al. <i>Phenotypic Characterization, Osteoblastic Differentiation and Bone Regeneration Capacity of Human Embryonic Stem Cell-derived Mesenchymal Stem Cells</i>	Sep-09	IMSTEM-0011990	IMSTEM-0012017		R, H, IO, P	

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SO	Article: Ghoresch, et al. <i>Generation of pathogenic TH17 cells in the absence of TGF- signaling</i>	10/21/2010	IMSTEM-0012025	IMSTEM-0012030		R, P, H, IO	
SP	Article: Rafei, et al. <i>Mesenchymal Stromal Cells Ameliorate Experimental Autoimmune Encephalomyelitis by Inhibiting CD4 Th17 T Cells in a CC Chemokine Ligand 2-Dependent Manner</i>	2009	IMSTEM-0012196	IMSTEM-0012204		R, H, IO, P	
SQ	Article: Glijbels, et al. <i>Administration of Neutralizing Antibodies to Interleukin-6 IL6 Reduces Experimental Autoimmune Encephalomyelitis and is Associated with Elevated Levels of IL-6 Bioactivity in Central Nervous System and Circulation</i>	Nov-95	IMSTEM-0012223	IMSTEM-0012233		R, H, IO, P	
SR	Article: Morando, et al. <i>The therapeutic effect of mesenchymal stem cell transplantation in experimental autoimmune encephalomyelitis is mediated by peripheral and central mechanisms</i>	2012	IMSTEM-0012259	IMSTEM-0012265		R, P, H, IO	
SS	Article: Duffy, et al. <i>Mesenchymal stem cell effects on T-cell effector pathways</i>	2011	IMSTEM-0012267	IMSTEM-0012275		R, P, H, IO	
ST	Article: Ghannami, et al. <i>Immunosuppression by mesenchymal stem cells: mechanisms and clinical applications</i>	2010	IMSTEM-0012284	IMSTEM-0012290		R, P, H, IO	
SU	Article: Carrion, et al. <i>Opposing effect of mesenchymal stem cells on Th1 and Th17 cell polarization according to the state of CD4 T cell activation</i>	10/1/2010	IMSTEM-0012524	IMSTEM-0012530		R, P, H, IO	
SV	Article: Darlington, et al. <i>Reciprocal Th1 and Th17 Regulation by Mesenchymal Stem Cells: Implication for Multiple Sclerosis</i>		IMSTEM-0012531	IMSTEM-0012536		R, H, IO, P	



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SW	Article: Ra, et al. <i>Safety of Intravenous Infusion of Human Adipose Tissue-Derived Mesenchymal Stem Cells in Animals and Humans</i>	11/8/2011	IMSTEM-0015559	IMSTEM-0015571		R, P, H, IO	
SX	Email from Kimbrel to Lanza et al. re Cell Stem Cell Editorial Decision...	3/31/2014	IMSTEM-0015663	IMSTEM-0015669		R, H, P	
SY	Email from Kimbrel to Lanza, Xu re ???!!!	3/24/2014	IMSTEM-0015670	IMSTEM-0015671		R, H, P	
SZ	Article: Xu, et al. <i>Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules</i>	5/4/2010	IMSTEM-0017235	IMSTEM-0017240		R, P, H, IO	
TA	Article: Erb, et al. <i>Endocrine and Epigenetic Control of Trophectoderm Differentiation from Human Embryonic Stem Cells the role of bone morphogenic protein 4 and histone deacetylases</i>	2009	IMSTEM-0017248	IMSTEM-0017300		R, P, H, IO	
TB	Letter from UHC Research to Dr. Wang	10/5/2010	IMSTEM-0017475	IMSTEM-0017475		R, P, H, LF, LK	
TC	Email from Sarnecky (CTInnovations) to Dr. Wang re Congratulations!	6/10/2010	IMSTEM-0017476	IMSTEM-0017477		R, P, H, LF, LK	
TD	Article: Lister, et al. <i>Hotspots of aberrant epigenomic reprogramming in human induced pluripotent stem cells</i>	2010	IMSTEM-0017517	IMSTEM-0017524		R, P, H, IO	
TE	Article: Bock, et al. <i>Reference Maps of Human ES and iPS Cell Variation Enable High-Throughput Characterization of Pluripotent Cell Lines</i>	2/4/2011	IMSTEM-0017525	IMSTEM-0017538		R, P, H, IO	
TF	Article: Jones, et al. <i>Accelerated axon loss in MOG35-55 experimental autoimmune encephalomyelitis (EAE) in myelin-associated glycoprotein-deficient (MAGKO) mice</i>	4/16/2011	IMSTEM-0017882	IMSTEM-0017890		R, P, H, IO	
TG	Email from Xu to Wand re ACT	8/12/2013	IMSTEM-0017993	IMSTEM-0017993		R, H, P	

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TH	Article: Lin, et al. <i>Progresses and Challenges in Optimization of Human Pluripotent Stem Cell Culture</i>	2010	IMSTEM-0018053	IMSTEM-0018053		R, P, H, IO	
TI	Email from Xu to Gallo, Wang re Patent Decision on Case Number 12-075	7/19/2012	IMSTEM-0018096	IMSTEM-0018097		R, P, H, LF, LK	
TJ	Article: Drukker, et al. <i>Isolation of primitive endoderm, mesoderm, vascular endothelial and trophoblast progenitors from human pluripotent stem cells</i>	Jun-12	IMSTEM-0018100	IMSTEM-0018113		R, P, H, IO	
TK	Article: Bernardo, et al. <i>Brachyury and CDX2 Mediate BMP-Induced Differentiation of Human and Mouse Pluripotent Stem Cells into Embryonic and Extraembryonic Lineages</i>	8/5/2011	IMSTEM-0018114	IMSTEM-0018125		R, P, H, IO	
TL	Article: Yu, et al. <i>FGF2 Sustains NANOG and Switches the Outcome of BMP4 Induced Human Embryonic Stem Cell Differentiation</i>	3/4/2011	IMSTEM-0018126	IMSTEM-0018134		R, P, H, I, IO	
TM	Email from Xu to Wand , Gall re T-MSD_disclosure_070812; attachment	7/11/2012	IMSTEM-0018144	IMSTEM-0018159		R, P, H, DE, IO, LF, LK	
TN	Email from Gallo to Wang re Disclosure	6/8/2012	IMSTEM-0018161	IMSTEM-0118162		R, P, H, IO, LF, LK	
TO	Article: Xu, et al. <i>BMP4 initiates human embryonic stem cell differentiation to trophoblast</i>	11/11/2002	IMSTEM-0018780	IMSTEM-0018783		R, H, IO, P	
TP	Article: Shen. <i>Nodal signaling: developmental roles and regulation</i>	6/1/2007	IMSTEM-0018823	IMSTEM-0018834		R, H, IO, P	
TQ	Article: Dahle, et al. <i>Nodal Signaling Recruits the Histone Demethylase Jmjd3 to Counteract Polycomb-Mediated Repression at Target Genes</i>	6/22/2010	IMSTEM-0018835	IMSTEM-0018843		R, P, H, IO	

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TR	Article: Laurent, et al. <i>Comprehensive MicroRNA Profiling Reveals a Unique Human Embryonic Stem Cell Signature Dominated by a Single Seed Sequence</i>	4/10/2008	IMSTEM-0018844	IMSTEM-0018855		R, H, IO, P	
TS	Article: Vallier, et al. <i>Nodal inhibits differentiation of human embryonic stem cells along the neuroectodermal default pathway</i>	9/22/2004	IMSTEM-0018856	IMSTEM-0018874		R, H, IO, P	
TT	Wang PowerPoint slides, "High efficiency Differentiation of HSC and MSC from human embryonic stem cells Feeder free and Serum free system"	4/5/2011	IMSTEM-0019617	IMSTEM-0019622		R, P, H, I, IO, LF, LK	
TU	Article: Lanner, et al. <i>The role of FGF/Erk signaling in pluripotent cells</i>	2010	IMSTEM-0019676	IMSTEM-0019685		R, P, H, IO	
TV	License Agreement between UCONN and Imstem	5/2/2013	IMSTEM-0020238	IMSTEM-0020259		R, P, H, A, LF, LK	
TW	Article: Slukvin, et al. <i>The mesenchymoangioblast, mesodermal precursor for mesenchymal and endothelial cells</i>	Jun-18	IMSTEM-0020608	IMSTEM-0020621		R, P, H, IO	
TX	Screenshot from Cell Stem Cell webportal re manuscript in process, "Treating an EAE Model of Multiple Sclerosis..."	3/4/2014	IMSTEM-0020763	IMSTEM-0020763		R, H, P, LK, LF	
TY	Imstem's Annual Technical Progress Report re Potential Therapy for MS	9/30/2015	IMSTEM-0021505	IMSTEM-0021530		R, H, P, IO	
TZ	Regenerative Medicine Research Fund (RMRF) Scientific Research Progress Report re 13-SCDIS-ISB-0	8/31/2017	IMSTEM-0021682	IMSTEM-0021693		R, P, LF, LK, H	
UA	Email from Xu to Wang re revised aim 3 and Joel's files	12/25/2012	IMSTEM-0021744	IMSTEM-0021765		R, P, H, IO, LF, LK	
UB	Email from Lu to Xu, Wang re looking forward to 2012 experiments; attachment	1/20/2012	IMSTEM-0021767	IMSTEM-0021775		R, P, H, LF, LK	
UC	Email from Kimbrel to Wang re looking forward to 2012 experiments	1/18/2012	IMSTEM-0021776	IMSTEM-0021777		R, P, H, LF, LK	

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UD	Article: Wang, et al. <i>Inhibition of Caspase-mediated Anoikis is critical for Basic Fibroblast Growth Factor-sustained Culture of Human Pluripotent Stem Cells</i>	12/4/2009	IMSTEM-0021841	IMSTEM-0021851		R, H, IO, P	
UE	Article: Wang, et al. <i>MEKK3 is Essential for Lymphopenia-Induced T Cell Proliferation and Survival</i>	2009	IMSTEM-0021852	IMSTEM-0021863		R, P, H, IO	
UF	Article: Wang, <i>MEKK3 Regulates IFN Production in T Cells through the Rac1/2-Dependent MAPK Cascades</i>	5/15/2011	IMSTEM-0021877	IMSTEM-0021896		R, P, H, IO	
UG	Email from Wang to Lazorchak re executive summary; attachment	7/12/2013	IMSTEM-0021922	IMSTEM-0021925		R, H, P	
UH	Imstem pitch/presentation poster (native doc)	11/6/2013	IMSTEM-0022370	IMSTEM-0022370		R, P, H, IO	
UI	Briefing Documents for IMS001 pre-pre-IND meeting; Sponsor: Imstem	3/6/2014	IMSTEM-0022924	IMSTEM-0022950		R, H, P	
UJ	Imstem Executive Summary	4/3/2014	IMSTEM-0023977	IMSTEM-0023979		R, H, P	
UK	Imstem powerpoint slides re MSC/T-MSC therapy in OA	4/3/2014	IMSTEM-0023980	IMSTEM-0023983		R, H, P, IO	
UL	Imstem Executive Summary	4/3/2014	IMSTEM-0024012	IMSTEM-0024014		H, I, LA, LF, LK	
UM	Imstem powerpoint slides re T-MSC technology	4/2/2014	IMSTEM-0024018	IMSTEM-0024043		H, I, LA, LF, LK	
UN	Email from X. Wang to A. Lazorchak transmitting PowerPoint slides (email and PDF of native attachment, 21pp total)	3/30/2014	IMSTEM-0024065	IMSTEM-0024066		Objections forthcoming	
UO	Imstem CBIF Application	3/14/2014	IMSTEM-0024197	IMSTEM-0024243		R, H, P	
UP	Article: Awe, et al. <i>Generation and characterization of transgene-free human induced pluripotent stem cells and conversion to putative clinical-grade status</i>	2013	IMSTEM-0025234	IMSTEM-0025248		R, H, IO, P	
UQ	Article: Guo, et al. <i>Modeling Sjogren's syndrom with Id3 conditional knockout mice</i>	9/10/2010	IMSTEM-0025591	IMSTEM-0025599		R, P, H, IO	

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UR	Article: Li, et al. <i>A T Cell Intrinsic Role of Id3 in Mouse Model for Primary Sjogren's Syndrom</i>	Oct-04	IMSTEM-0025600	IMSTEM-0025609		R, H, IO, P	
US	Article: Kimbrel et al <i>Mesenchymal Stem Cell Population Derived from Human Pluripotent Stem Cells Displays Potent Immunomodulatory and Therapeutic Properties</i> (pre-publication galley)	3/29/2014	IMSTEM-0026288	IMSTEM-0026343		R, H, IO, P	
UT	Email from A. Lazorchak to X. Wang re Business Plan for New York summit 2014, with attached PowerPoint slides (email and PDF of native attachment, 21pp total)	3/25/2014	IMSTEM-0026344	IMSTEM-0026345		Objections forthcoming	
UU	Email from Pachter to Xu and Wang re (no subject)	6/9/2014	IMSTEM-0027491	IMSTEM-0027491		R, H, P	
UV	Article: Ge, et al. <i>The CCL2 synthesis inhibitor bindarit targets cells of the neurovascular unit and suppresses experimental autoimmune encephalomyelitis</i>	2012	IMSTEM-0027724	IMSTEM-0027736		R, P, H, IO	
UW	Article: D'Souza, et al. <i>GSK3 Inhibition Promotes Efficient Myeloid and Lymphoid Hematopoiesis from Non-human Primate-Induced Pluripotent Stem Cells</i>	2/9/2016	IMSTEM-0027889	IMSTEM-0027902		R, H, IO, P	
UX	Email from Wang to Xu re collaboration	3/29/2014	IMSTEM-0029820	IMSTEM-0029821		R, H, P	
UY	Information Disclosure Statement and accompanying docs	6/1/2016	IMSTEM-0039591	IMSTEM-0039614		R, H, P, A	
UZ	U.S. National Stage Application PCT/US2013/048291 (i.e., U.S. Patent Application 14/413,290)	1/7/2015	IMSTEM-0039650	IMSTEM-0039807		P, H, A, IO	
VA	Email from katrinac@umac.mo to wicell2000@yahoo.com re (no subject)	5/22/2014	IMSTEM-0040319	IMSTEM-0040323		R, H, P, IO	
VB	Email from Deng to wicell2000@yahoo.com re (no subject)	5/21/2014	IMSTEM-0040339	IMSTEM-0040341		R, H, P, IO	

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VC	Email from wicell2000@yahoo.com to Deng re (no subject); attachment	5/21/2014	IMSTEM-0040342	IMSTEM-0040347		R, H, P, IO	
VD	Email from Alfred Wang to WiCell <wicell2000@yahoo.com> transmitting of Business Proposal dated March 8, 2012	3/11/2012	IMSTEM-0040454	IMSTEM-0040472		Objections forthcoming	
VE	Business Proposal dated July 4, 2012	7/4/2012	IMSTEM-0040492	IMSTEM-0040506		Objections forthcoming	
VF	Imstem Business Proposal	7/4/2012	IMSTEM-0040492	IMSTEM-0040506		H, LF, LK	
VG	Business Proposal dated March 8, 2012	3/8/2012	IMSTEM-0040508	IMSTEM-0040524		Objections forthcoming	
VH	Article: Barberi, et al. <i>Derivation of Multipotent Mesenchymal Precursors from Human Embryonic Stem Cells</i>	Jun-05	IMSTEM-0042168	IMSTEM-0042174		R, H, IO, P	
VI	Article: Hu, et al. <i>Neural differentiation of human induced pluripotent stem cells follows developmental principles but with variable potency</i>	1/19/2010	IMSTEM-0042603	IMSTEM-0042608		R, H, IO, P	
VJ	Article: Feng, et al. <i>Hemangioblastic Derivatives from Human Induced Pluripotent Stem Cells Exhibit Limited Expansion and Early Senescence</i>	2/4/2010	IMSTEM-0042609	IMSTEM-0042623		R, P, H, IO	
VK	Non-Final Office Action in connection with '551 Non-Provisional	7/28/2016	IMSTEM-0043278	IMSTEM-0043288		R, H, P, A	
VL	Redacted email from Wang to Cheng	6/20/2013	IMSTEM-0043610	IMSTEM-0043610		R, P, H, LF, LK, I	
VM	Patent Application Publication 2015/0203820	7/23/2015	IMSTEM-0044926	IMSTEM-0044993		R, H, P	
VN	Article: Meng, et al. <i>Synergistic Effect of Medium, Matrix, and Exogenous Factors on the Adhesion and Growth of Human Pluripotent Stem Cells Under Defined, Xeno-Free Conditions</i>	2012	IMSTEM-0045334	IMSTEM-0045346		R, P, H, IO	

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VO	Article: Blasi, et al. <i>Dermal fibroblasts display similar phenotypic and differentiation capacity to fat-derived mesenchymal stem cells, but differ in anti-inflammatory and angiogenic potential</i>	2011	IMSTEM-0046052	IMSTEM-0046065		R, P, H, IO	
VP	Article: Bouffi, et al. <i>IL-6-Dependent PGE2 Secretion by Mesenchymal Stem Cells Inhibits Local Inflammation in Experimental Arthritis</i>	Dec-10	IMSTEM-0046066	IMSTEM-0046077		R, P, H, IO	
VQ	Article: Bowles, et al. <i>Mesenchymal Stem Cell-Based Therapy in a Mouse Model of Experimental Autoimmune Encephalomyelitis (EAE)</i>	3/24/2015	IMSTEM-0046078	IMSTEM-0046096		R, H, P	
VR	Article: Denu, et al. <i>Fibroblasts and Mesenchymal Stromal/Stem Cells are Phenotypically Indistinguishable</i>	5/18/2017	IMSTEM-0046097	IMSTEM-0046116		R, H, IO, P	
VS	Article: Drago, et al. <i>The stem cell secretome and its role in brain repair</i>	12/1/2013	IMSTEM-0046117	IMSTEM-0046152		R, H, IO, P	
VT	Article: Efe, et al. <i>The evolving biology of small molecules: controlling cell fate and identify</i>	2011	IMSTEM-0046153	IMSTEM-0046166		R, P, H, IO	
VU	Article: Erta, et al. <i>Interleukin-6, a Major Cytokine in the Central Nervous System</i>	10/25/2012	IMSTEM-0046167	IMSTEM-0046179		R, P, H, IO	
VV	Article: Ferreira, et al. <i>Mesenchymal Stromal Cell Secretome: Influencing Therapeutic Potential by Cellular Pre-conditioning</i>	Dec-18	IMSTEM-0046180	IMSTEM-0046196		R, H, IO, P	
VW	Article: Francois, et al. <i>Adoptive transfer of mesenchymal stromal cells accelerates intestinal epithelium recovery of irradiated mice in an interleukin-6-dependent manner</i>	4/4/2012	IMSTEM-0046197	IMSTEM-0046203		R, P, H, IO	

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VX	Article: Hass, et al. <i>Different populations and sources of human mesenchymal stem cells: A comparison of adult and neonatal tissue-derived MSC</i>	2011	IMSTEM-0046204	IMSTEM-0046217		R, P, H, IO	
VY	Article: Halfon, et al. <i>Markers Distinguishing Mesenchymal Stem Cells from Fibroblasts are Downregulated with Passaging</i>	11/1/2011	IMSTEM-0046231	IMSTEM-0046244		R, P, H, IO	
VZ	Article: Keating. <i>Mesenchymal Stromal Cells: New Directions</i>	5/1/2012	IMSTEM-0046253	IMSTEM-0046260		R, P, H, IO	
WA	Article: Kurte, et al. <i>Intravenous Administration of Bone Marrow-Derived Mesenchymal Stem Cells Induces a Switch from Classical to Atypical Symptoms in Experimental Autoimmune Encephalomyelitis</i>	1/23/2015	IMSTEM-0046261	IMSTEM-0046275		R, H, IO, P	
WB	Article: Lee, et al. <i>Proteomic Analysis of Tumor Necrosis Factor-Induced Secretome of Human Adipose Tissue-Derived Mesenchymal Stem Cells</i>	10/6/2009	IMSTEM-0046276	IMSTEM-0046284		R, H, IO, P	
WC	Article: Lin, et al. <i>Commonly Used Mesenchymal Stem Cell Markers and Tracking Labels: Limitations and Challenges</i>	Sep-13	IMSTEM-0046285	IMSTEM-0046295		R, H, IO, P	
WD	Article: McKee, et al. <i>Advances and challenges in stem cell culture</i>	Jul-17	IMSTEM-0046296	IMSTEM-0046311		R, H, IO, P	
WE	Article: Payne, et al. <i>Distinct Immunomodulatory and Migratory Mechanisms Underpin the Therapeutic Potential of Human Mesenchymal Stem Cells in Autoimmune Demyelination</i>	10/4/2012	IMSTEM-0046312	IMSTEM-0046328		R, P, H, IO	
WF	Article: Peng, et al. <i>Comparative Analysis of Mesenchymal Stem Cells from Bone Marrow, Cartilage, and Adipose Tissue</i>	2008	IMSTEM-0046329	IMSTEM-0046347		R, H, IO, P	



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WG	Article: Pricola, et al. <i>Interleukin-6 Maintains Bone Marrow-Derived Mesenchymal Stem Cell Stemness by an ERK1/2-Dependent Mechanism</i>	10/15/2009	IMSTEM-0046348	IMSTEM-0046371		R, H, IO, P	
WH	Article: Rombouts, et al. <i>Primary murine MSC show highly efficient homing to the bone marrow but lose homing ability following culture</i>	2003	IMSTEM-0046372	IMSTEM-0046382		R, P, H, IO	
WI	Article: Ross, et al. <i>High and Low Dose Irradiation Have Opposing Effects on Cytokine Gene Expression in Human Glioblastoma Cell Lines</i>	1997	IMSTEM-0046383	IMSTEM-0046391		R, P, H, IO	
WJ	Douglas Sipp, et al. Clear up This Stem-cell Mess. Nature <a href="https://www.nature.com/articles/d41586-018-06756-9">https://www.nature.com/articles/d41586-018-06756-9</a>	9/26/2018	IMSTEM-0046392	IMSTEM-0046394		H, IO	
WK	Article: Waterman, et al. <i>A New Mesenchymal Stem Cell Paradigm: Polarization into a Pro-Inflammatory MSC1 or an Immunosuppressive MSC2 Phenotype</i>	4/26/2010	IMSTEM-0046395	IMSTEM-0046408		R, P, H, IO	
WL	Article: Zhang, et al. <i>Transplantation of Autologous Adipose Stem Cells Lacks Therapeutic Efficacy in the Experimental Autoimmune Encephalomyelitis Model</i>	Jan-14	IMSTEM-0046409	IMSTEM-0046419		R, H, IO, P	
WM	Article: Petkovic, et al. <i>The role of interleukin-6 in central nervous system demyelination</i>	Dec-16	IMSTEM-0046420	IMSTEM-0046421		R, H, IO, P	
WN	Bruce Alan Bunnell's Updated Curriculum Vitae		IMSTEM-0046422	IMSTEM-0046491		Objections forthcoming	
WO	[Intentionally left blank]	6/24/2019	N/A			W	
WP	956 Non-Provisional (CIP of '321)	5/30/2013	N/A			H, A, LF, LK	
WQ	Amendment and Response to Restriction Requirement	5/30/2013	N/A			H, A, DE, LF, LK	

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<b>TRIAL EXHIBIT #</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>BEGBATES</b>	<b>ENDBATES</b>	<b>Dep. Exhibit #</b>	<b>Plfs.' Ob.</b>	<b>Defs.' Obj</b>
<b>WR</b>	Article: "New Stem Cell Company Opens Lab at Uconn Health Center," UConn Today <a href="https://today.uconn.edu/2013/02/new-stem-cell-company-opens-lab-at-uconn-health-center/">https://today.uconn.edu/2013/02/new-stem-cell-company-opens-lab-at-uconn-health-center/</a>	2/18/2013	N/A			R, P, H, A, LF, LK, U	
<b>WS</b>	Article: "Stem cell grants target Multiple sclerosis, epilepsy, cancer" CT Mirror <a href="https://ctmirror.org/2013/06/13/stem-cell-grants-target-multiple-sclerosis-epilepsy-cancer/">https://ctmirror.org/2013/06/13/stem-cell-grants-target-multiple-sclerosis-epilepsy-cancer/</a>	6/13/2013	N/A			R, P, H, A, LF, LK	
<b>WT</b>	Article: Constantinescu, et al. Experimental autoimmune encephalomyelitis (EAE) as a model for multiple sclerosis (MS) <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3229753/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3229753/</a>	10/1/2011	N/A			R, P, H, IO	
<b>WU</b>	Article: Slukvin, et al., A Mesoderm-Derived Precursor for Mesenchymal Stem and Endothelial Cells	12/3/2010	N/A			R, P, H, IO, U	
<b>WV</b>	Astellas' Corporate Disclosure Statement	11/13/2017	N/A			R, P, H	
<b>WW</b>	Bone et al. J Cell Sci 124:1992–2000, 2011 A novel chemically directed route for the generation of definitive endoderm from human embryonic stem cells based on inhibition of GSK-3	1/1/2011	N/A			R, P, H, IO	
<b>WX</b>	Cai L, et al. Cell Res 17:62–72, 2007 Promoting human embryonic stem cell renewal or differentiation by modulating Wnt signal and culture conditions Cai L, et al. Cell Res 17:62–72, 2007 (42)	1/1/2007	N/A			R, H, IO, P	

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TRIAL EXHIBIT #	DESCRIPTION	DATE	BEGBATES	ENDBATES	Dep. Exhibit #	Plfs.' Ob.	Defs.' Obj
WY	Davidson, et al. Wnt/B-catenin signaling promotes differentiation, not self-renewal, of human embryonic stem cells and is repressed by Oct4	2/1/2012	N/A			R, P, H, IO	
WZ	Dravid, et al. <i>Defining the Role of Wnt/B-Catenin Signaling in the Survival, Proliferation, and Self-Renewal of Human Embryonic Stem Cells</i>	7/7/2005	N/A			R, H, IO, P	
XA	Exclusive License Agreement between ACT and Embryome Sciences, Inc.	7/10/2008	N/A			R, P, LF, LK, H	
XB	Hasegawa et al. Stem Cells 24:2649–2660, 2006 A Method for the Selection of Human Embryonic Stem Cell Sublines with High Replating Efficiency After Single-Cell Dissociation	1/1/2006	N/A			R, H, IO, P	
XC	Imstem's Corporate Disclosure Statement	12/6/2017	N/A			R, P, H	
XD	Letter from B. Danek to T. Shannon	7/15/2019	N/A			BE, R, H, P, LA, LF, LK	
XE	Letter from B. Danek to T. Shannon	7/18/2019	N/A			BE, R, H, P, LA, LF, LK	
XF	Nakanishi M, et al. FASEB J 23:114–122, 2009 Directed induction of anterior and posterior primitive streak by Wnt from embryonic stem cells cultured in a chemically defined serum-free medium	1/1/2009	N/A			R, H, IO, P	
XG	Notice of Allowance and Fee(s) Due	5/30/2013	N/A			H, A, LF, LK	
XH	Plaintiffs' Privilege Log, Page 10	7/29/2019	N/A			BE, R, H, P, LA, LF, LK	
XI	Plaintiffs' Response to Defendants' 30(b)(6) Notice	8/7/2019	N/A			BE, R, H, P, LA, LF, LK	
XJ	Plaintiffs' Response to Defendants' First Requests for Production	1/16/2019	N/A			BE, R, H, P, LA, LF, LK	

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<b>TRIAL EXHIBIT #</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>BEGBATES</b>	<b>ENDBATES</b>	<b>Dep. Exhibit #</b>	<b>Plfs.' Ob.</b>	<b>Defs.' Obj</b>
<b>XK</b>	Plaintiffs' Response to Defendants' Fourth Set of Interrogatories (29)	10/15/2019	N/A			BE, R, H, P, LA, LF, LK, IO	
<b>XL</b>	Plaintiffs' Response to Defendants' Second Requests for Production	10/11/2019	N/A			BE, R, H, P, LA, LF, LK	
<b>XM</b>	SCRM's Corporate Disclosure Statement	11/13/2017	N/A			R, P, H	
<b>XN</b>	Sturgeon, et al. Wnt Signaling Controls the Specification of Definitive and Primitive Hematopoiesis From Human Pluripotent Stem Cells	6/1/2014	N/A			R, H, IO, P	
<b>XO</b>	Tan, et al. Efficient Derivation of Lateral Plate and Paraxial Mesoderm Subtypes from Human Embryonic Stem Cells Through GSKi-Mediated Differentiation	1/1/2013	N/A			R, P, H, IO	
<b>XP</b>	Ullmann, et al. GSK-3-specific inhibitor-supplemental hESC medium prevents the epithelial-mesenchymal transition process and the up-regulation of matrix metalloproteinases in hESCs cultured in feeder-free conditions	2/7/2008	N/A			R, H, IO, P	
<b>XQ</b>	Wang et al. Gastroenterology, 2013 Isolation and Characterization of Intestinal Stem Cells Based on Surface Marker Combinations and Colony-Formation Assay	1/1/2013	N/A			R, P, H, IO	
<b>XR</b>	Lab Meeting Slides (PDF of native doc, 9 pp)	12/3/2009	SCRM1001705	SCRM1001705		R, P, LK, LF, H	
<b>XS</b>	SCRM Mutual Non-Disclosure Agreement	9/1/2009	SCRM1005279	SCRM1005288		R, P, LF, MD, H	
<b>XT</b>	Lab Meeting Minutes	3/5/2010	SCRM1008718	SCRM1008718		R, P, H, LF, LK	

**Astellas' Reservation of Rights**

Astellas reserves all rights to amend and update the trial exhibit list, to submit, as appropriate, additions and/or deletions to the above as the pretrial and trial process evolves, including meeting and conferring with Defendants on outstanding trial management issues and receiving the Court's rulings on any pending or later-filed motions, to remove entries that prove unnecessary, to rebut unanticipated evidence presented at trial by Defendants, and for any other permissible reason under the Federal Rules of Evidence, Federal Rules of Civil Procedure, and the Local Rules of the Court. Astellas may decide not to offer certain of the listed exhibits into evidence, and some of the exhibits are contingent on what Defendants offer into evidence. The inclusion of an exhibit on this list does not constitute an admission that the exhibit would be admissible if offered by Defendants. Astellas further reserves the right to offer into evidence any trial exhibit on this list offered by Defendants on their initial trial exhibit list or otherwise adduced at trial. Astellas also reserves the right to offer additional evidence on rebuttal and in response to any testimony, evidence, or argument offered by Defendants at trial.

**ImStem's Reservation of Rights**

Defendants reserve all rights to amend and update the trial exhibit list, to submit, as appropriate, additions and/or deletions to the above as the pretrial and trial process evolves, including meeting and conferring with Astellas on outstanding trial management issues and receiving the Court's rulings on any pending or later-filed motions, to remove entries that prove unnecessary, to rebut unanticipated evidence presented at trial by Astellas, and for any other permissible reason under the Federal Rules of Evidence, Federal Rules of Civil Procedure, and the Local Rules of the Court. Defendants may decide not to offer certain of the listed exhibits into evidence, and some of the exhibits are contingent on what Astellas offers into evidence. The inclusion of an exhibit on this list does not constitute an admission that the exhibit would be admissible if offered by Astellas. Defendants further reserve the right to offer into evidence any trial exhibit on this list offered by Astellas on their initial trial exhibit list or otherwise adduced at trial. Defendants also reserve the right to offer additional evidence on rebuttal and in response to any testimony, evidence, or argument offered by Astellas at trial.

**KEY OF ASTELLAS' OBJECTIONS TO DEFENDANTS' EXHIBITS**

<b>Description</b>	<b>Abbreviation</b>	<b>Objection</b>
Attorney-Client	AC	Attorney-Client Privilege or Work Product (FRE 502)
Authenticity	A	The exhibit has not been properly authenticated for admission into evidence. (FRE 104, 901)
Best Evidence	BE	Best Evidence (FRE 1002-03)
Confidentiality	CO	The exhibit contains confidential business information but is not properly labeled pursuant to the Protective Order.
Description Error	DE	The descriptive title used for the proposed exhibit is inaccurate, misleading or incomplete.
Duplication	DU	The document is included on the exhibit list more than one time or contains other documents that are included on the exhibit list.
Foreign Language	FL	Foreign Language Document that does not include certified translation.
Hearsay	H	Hearsay (FRE 802)
Improper Opinion	IO	Proposed exhibit contains improper opinion testimony from a fact witness or improper expert opinion testimony (FRE 701 and 702).
Incomplete	I	The copy of the exhibit provided by Plaintiff is incomplete. (FRE 106)
Improper Summary	IS	The document does not accurately and/or properly summarize the content it purports to summarize (FRE 1006)
Limited Admissibility	LA	The document may be admissible against a party or for a purpose, but not against another party or for another purpose. (FRE 105)

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 Lettered Exhibits With Objections

Description	Abbreviation	Objection
Lacks Foundation	LF	There is no foundation for the proposed exhibit or for testimony contained in the exhibit (FRE 104).
Lacks Knowledge	LK	Proposed exhibit contains material that is not within the personal knowledge of the witness (FRE 602).
Motion in Limine	MIL	Document is subject of Motion <i>in Limine</i>
Multiple Documents	MD	Proposed exhibit is actually multiple documents.
Not Proper Evidence	NP	The exhibit is not proper evidence.
Prejudice	P	Prejudice, Misleading, Confusion of Issues, Duplicative, and/or Cumulative (FRE 403)
Relevance	R	Relevance (FRE 402)
Untimely	U	The proposed exhibit was not timely produced or contains contentions, opinions, claim construction positions, facts and/or information that were not timely disclosed.
Wrong Document	W	The exhibit does not match the description, is the wrong document, or was not provided.